

United States  
Circuit Court of Appeals

For the Ninth Circuit.

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Transcript of Record.

(IN SIX VOLUMES)

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THE KOKE COMPANY OF AMERICA, THE SOUTHERN  
KOKE COMPANY, LIMITED, THE KOKE COMPANY OF  
TEXAS, THE KOKE COMPANY OF OKLAHOMA, and  
THE KOKE COMPANY OF ARKANSAS,

Appellants,

vs.

THE COCA-COLA COMPANY, a Corporation,

Appellee.

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VOLUME VI.  
(Pages 2109 to 2529, Inclusive.)

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Upon Appeal from the United States District Court for the  
District of Arizona.

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(Deposition of H. B. Pierce.)

Mr. Jones practically the same way. It was practically a stereotyped opening. I would ask for the proprietor of the store and on meeting him I would introduce myself as "Mr. Pierce from the Coca-Cola Company" at times, and at other times by "from the Law Department of the Coca-Cola Company." I never at any time introduced myself as an attorney for the Coca-Cola Company. In every case, I always gave the proprietor or manager my card. I don't know how the dealers over the country got the impression that I was an attorney for the Coca-Cola Company, you will have to ask them about that. After introducing myself, I would state to them that we had made an investigation in connection with their business in the sale of the product "Coca-Cola," and from that investigation we had determined that they were no doubt selling an imitation product as and for "Coca-Cola" at their fountain, and that before going further in the matter I had been instructed by the Coca-Cola Company to go and see [1588] them and talk the matter over with them in a general way and endeavor to reach an agreement between themselves and the Coca-Cola Company that they would discontinue the practice, and the Coca-Cola Company would proceed no further in the matter against them. I invariably explained, as I did to Mr. Jones of the Yellow Pine Pharmacy, their legal status in so far as unfair competition was concerned, and that they were liable to prosecution by unfair competition and fraudulent substitution, but

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that the Coca-Cola Company was at all times generous in these matters, and they preferred to go to the trouble and expense of having one of their representatives call and see them and take this matter up with them in a man-to-man fashion, submitted the reports as they were rendered, together with reports of analyses, and after acquainting them with all these facts, see if they couldn't see their way clear to discontinue the practice complained of by the company. In no case would I approach a dealer and tell him that he was substituting, or that he was a substitutor, and that he would have to quit. I never told any dealer that, not right off that way, direct. It is possible I may have told them that in the course of the conversation. Yes, sir, I told them that I had the dope on them, and that we could sue them and put them out of business, yes, sir,—no, sir, but that we could sue them, and probably would.

XQ. 278. "And force them to handle 'Coca-Cola'?"

A. "Not necessarily that, but force them to sell no other imitation product for "Coca-Cola." [1589]

XQ. 279. "And that if they didn't quit handling these so-called imitations, that sooner or later they would be force to quit handling them?"

A. "After they had stated that their understanding of the terms "dope" and "coke" was that it meant 'Coca-Cola,' it was pointed out to them that if that was their understanding, then, of course, they were morally bound not to handle any other imita-

(Deposition of H. B. Pierce.)

tion product, either on calls for 'Coca-Cola,' 'Dope,' or 'Coke.' "

(Objected to by defendant because not responsive. Overruled. Exception.)

I told the dealers on whom I called that if they didn't quit handling these so-called imitations or substitutes, they would be forced to quit handling them by the Coca-Cola Company through a suit, if they were selling these imitation beverages as and for "Coca-Cola." Yes, sir, I told them that if they sold them as and for "coke" or "dope"—under calls for "coke" and "dope"—that they would be forced to quit handling them through a suit by the Coca-Cola Company, after they admitted it was their understanding that the terms "dope" and "coke" meant "Coca-Cola."

You ask why it made any difference whether they admitted it or not, and you say suppose they did not admit it; well, if they didn't admit it, that was probably another question. You ask if the Coca-Cola Company had not, as a matter of fact, started out to endeavor to stop the sale of all products similar to "Coca-Cola" under the names "coke" or "dope" or "shot in the arm" or anything of that sort; not that I know of, no, sir. You ask if they were entirely willing and had no objection [1590] to other products being sold under the name "coke" and "dope" and "shot in the arm" and things of that sort; they had objection to any imitation product being sold as "Coca-Cola" or as "dope" and "coke."



(Deposition of H. B. Pierce.)

I did not tell the dealers that if they sold any product they had—"Ko-Nut," "Tru-Cola," "Koke," or "Dope," or any of these products similar to "Coca-Cola," under the name of "coke" or "dope" that they would be sued. I never told any of them that. I don't know anything about whether or not any of my men told them that. My instructions are otherwise. You ask why I didn't endeavor to do that, if the Coca-Cola Company was endeavoring to stop them from selling these other products under the name of "coke" and "dope." As a rule we find the dealer who is handling an imitation product is also selling the same as and for "Coca-Cola."

(Defendants object to the answer because not in response to the question, and move to strike it. Overruled. Exception.)

I didn't endeavor to do it at all. You ask why I did not tell those dealers that if they persisted in selling these other products when "coke" and "dope" were asked for they would be sued by the Coca-Cola Company, just as they would be when they sold them where "Coca-Cola" was asked for; simply because it was not told them—the why of it is another question. You ask if that is the best answer I can give to that; yes, sir, it just wasn't done,—that's the answer. Of course, I mean by that that it wasn't done by me, that is the idea—I say by myself or my instructions. I did not instruct any of my men or any one under me to inform the dealers that if they sold other products similar [1591] to

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Coca-Cola under the names “coke” and “dope” they were liable to suit at the hands of the Coca-Cola Company, or that they would be sued. Neither I myself, nor any of the men under my charge, so far as I know, have taken any steps directly to stop dealers from selling products similar to “Coca-Cola” under the names “coke” and “dope.” Aside from the present suit the Coca-Cola Company has taken no steps that I know of to stop the sale of beverages similar to “Coca-Cola” under the names of “coke” and “dope.” Yes, sir, I have seen some of the Coca-Cola Company’s advertisements, I have seen those in which they say “Demand the genuine by full name—nicknames encourage substitution.” I have seen their advertising in magazines in which they urge the public to drop any nicknames—“Ask for it by its full name—nicknames encourage substitution.” I do not know how long the Coca-Cola Company has been advertising in that fashion. I have observed it for about two years. I don’t know whether or not prior to the institution of this suit the Coca-Cola Company had ever brought suit against any other concern seeking to enjoin them from using the names “coke” and “dope” or from selling their products when “coke” and “dope” were asked for. The Coca-Cola Company had not done so to my knowledge. The Coca-Cola Company first began to investigate concerning the names “coke” and “dope” possibly in 1912, positively, in 1913. That was in connection with this case and other products.

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That was when the men under me were instructed to begin these investigations. We had investigated the question fully and reported to the company prior to the bringing of the suit in this case. Counsel for [1592] the Coca-Cola Company had all the information that I and my crew had gotten up with reference to the meaning of the words "coke" and "dope" in their possession in writing, written reports—about a year prior to the bringing of the suit in this case. In discussing with dealers these drinks similar to "Coca-Cola" I always refer to them as "imitation products" and "substitutes." I cannot answer whether my men have done the same or not. They were not necessarily instructed to do so. They may have applied the terms themselves, probably from hearing me refer to them in that manner. I have been out with some of them, and I probably referred to them as imitations or substitutions. I frequently referred to the product of the Southern Koke Company as "cheap imitations"—as "substitutes." It was not I who told dealers throughout the country that the "Koke" Company was engaged in a fraudulent business, and that its product was an imitation. I have not told dealers that if they continued to handle "koke" and "dope" the products of the Southern Koke Company, they would be participating in a fraudulent scheme. It was possibly some of the other men who said that. Yes, sir, I have tried to produce the atmosphere wherever I went in talking to dealers handling products other



(Deposition of H. B. Pierce.)

than "Coca-Cola" that those products were imitations and substitutes for "Coca-Cola," and that if they sold them in response to requests for "dope" and "coke" they would be substitutors, and that they would be guilty of fraudulent practices in so doing. I have tried to sorter educate the trade along that line. Of course, that included the products "koke" and "dope," the products of the Southern Koke Company. The idea I conveyed to the dealers was that the Southern Koke Company [1593] was a fraudulent concern engaged in a fraudulent business. Our information as to the various products the dealers are handling usually comes from the sales department of the Coca-Cola Company. It is not true that these men are constantly on the road keeping the trade who handle products similar to "Coca-Cola" under surveillance to see whether or not they are substituting. No, that is not the very purpose for which they are employed—to find out cases of substitution. The purpose is to make investigation of cases of fraudulent substitution brought to our notice by representatives of the Coca-Cola Company,—particular and specific cases. These men have traveled through the Southern States keeping soda-fountain men who handle products similar to "Coca-Cola" under surveillance and making tests at their different places to ascertain what they are handling, but they did so only when they were sent there specifically to make those tests. They have been sent specifically to a great number of soda-fountains. It



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is a fact that the Coca-Cola Company, by whatever means it gets its information, does in fact keep up with the dealers who handle competitive products, and makes reports from time to time, of just what concerns are handling what. They endeavor to do that—when the concerns are handling other products and selling same as and for “Coca-Cola,” but not necessarily when they are selling them as and for “coke” or “dope.” Yes, sir, the Coca-Cola Company have very serious objections to their handling these products as and for “coke” or “dope.” You ask why don’t they investigate that too; we find as a rule wherever we have to make an investigation that there is [1594] never any question of the sale of an imitation product as and for “Coca-Cola,” that is usually the excuse for handling it. You ask why we don’t treat the sale of other products when “coke” or “dope” is asked for the same as we do the sale of such product when “Coca-Cola” is asked for if the Coca-Cola Company has serious objections to the handling of these products as and for “coke” or “dope”; well, because we invariably find those dealers are selling these products as and for “Coca-Cola”—we don’t necessarily have to bring up the question of their handling these products as for “dope” and “coke” specifically. You ask why we make a distinction; well, we have to make a distinction because it generally works out that way. No, I have not instructed any of my men not to tell the dealers that if they sold these products similar to “Coca-

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Cola" in response to requests for "dope" and "coke" they would be prosecuted. I have not given them any instructions along that line. I have had no reports from any of my men that I recall at this time, in which they stated they had told dealers they would be prosecuted if they sold products similar to "Coca-Cola" under the name "coke" and "dope," not unless they admitted that their understanding of the meaning of the terms "dope" and "coke" was "Coca-Cola." If a man considers that he is not substituting when he sells a product similar to "Coca-Cola" in response to requests for "coke" and "dope" then we leave him alone on that question at that particular time. It has been proven that eventually from investigation we get that same dealer eventually selling some of that imitation product as and for "Coca-Cola." When we find a man of that character we keep him under surveillance until we do [1595] catch a case of substitution. We have had the dealers who have testified in this case on behalf of the defendants under surveillance since they have testified in this case. Tests were made at most of their soda-fountains after they testified in this case, which tests were made by the detectives under my direction. I had all of them employed on it, possibly, Bolton, Peace, Ross and Platt and Murphy and possibly Friend. No, the present suit is not the first attempt through legal proceedings, so far I know, that the Coca-Cola Company has made to enjoin anyone from selling any other product similar

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to Coca-Cola under names “coke” and “dope.” They have brought other suits within my knowledge. They brought a suit against the Heinz Cigar Company for one. I do not recall whether or not the bill in that case specifically attempted to enjoin the use of the word “coke” and “dope.” The bill itself did not attempt to enjoin the use of the words “coke” and “dope,” but an attempt was made by proof in that case after the suit had been started to prove that “coke” and “dope” meant “Coca-Cola.” I did not testify in that case, but Sam Friend did. There were three or four other detectives operating with Friend on that case. Yes, sir, I conducted the examination of the witnesses in that case at Roanoke, Virginia. I assisted Mr. Smith. Since my employment with the Coca-Cola Company, I have kept closely affiliated with its attorneys. I am not acquainted with the various suits they have brought against dealers and other concerns. I am acquainted with some of them, just those I am particularly interested in—I have got sufficient work to do without charging myself with any of the work of [1596] counsel. I have had charge of all the investigations of facts. Yes, sir, I know the character of the suits brought and the object sought to be obtained by those suits—those that were brought directly from my department. No suits have been brought that I know of by the Coca-Cola Company to enjoin dealers in other products from, among other things, selling any other product similar in color to “Coca-



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Cola," or that could be substituted for "Coca-Cola." Yes, sir; I recall the suit against Thornton, of the Corner Drug Store, at Hattiesburg, Mississippi. The bill in that case did not pray to have the defendant enjoined from selling any other drink of a color similar to "Coca-Cola," so far as I know. It is a fact that the Coca-Cola Company has been endeavoring to stamp out the sale of other products which are not only similar in color to "Coca-Cola," but also similar thereto in taste, and which could be substituted for "Coca-Cola," where those imitation products were being sold as and for "Coca-Cola." It is a fact that in nearly all the contracts which I and my men, or the Coca-Cola Company, have procured from dealers who handle products similar to "Coca-Cola," it was recited in those contracts that the dealers not only agreed not to substitute for "Coca-Cola," but they agreed in addition not to handle any other products of the same or similar color as "Coca-Cola," or that could be substituted for "Coca-Cola." I have no knowledge of the fact that the prayer for relief in the suit brought against the Corner Drug Store at Hattiesburg, Mississippi, was so broad that it was amended by agreement of counsel so as not to seek an injunction against the defendant for instance from selling root beer or sarsaparilla. [1597] The Coca-Cola Company has brought about twenty suits against dealers who handle other products similar to "Coca-Cola," to my knowledge. I think they have brought about six

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suits to my knowledge against the manufacturers of such products, not including the present suit against the Koke Companies. I am not familiar with the suit brought against the "Glee-Nol Botting Company." I didn't prepare that case, nor did any of the men under my charge. That suit was brought while I was connected with the Coca-Cola Company, but the Pinkerton detectives from the New Orleans office worked that case up. Neither did I have any connection in preparing the facts in the case of the Coca-Cola Company against Branham *et al.* I didn't know of it until it was over. I am not familiar with the bill in the case of the Coca-Cola Company against the Anti-Monopoly Drug Store in the Federal Court at Jacksonville, Florida, but I prepared the facts in that case. Prior to the bringing of the suit in this case, the only other suit that the Coca-Cola Company had brought where it was specifically charged in the bill that the names "coke" and "dope" were nicknames for "Coca-Cola" was the Branham case, in which the Coca-Cola Company's bill was dismissed. I do not recall any other suit wherein that charge was made. Before we began to investigate the facts in this case in which I am now testifying, we did not ever make any investigations as to the meaning of the words "coke" and "dope" for the Coca-Cola Company, nor did anyone in the company's employ, that I know of. I never instructed anyone to make any such investigation. Prior to the time we began to work on the facts in

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this case, we did not ever [1598] endeavor to stop dealers from selling drinks similar to “Coca-Cola” when “coke” and “dope” were asked for, so far as I know. I do not remember to have personally secured any agreements similar to Plaintiff’s Rebuttal Exhibits Nos. 116, 117, and 118 from dealers to subsequent to October 15th, 1914, but I have instructed my men to procure such agreements subsequent to that time. The procuring of said agreements was done with the knowledge and consent of counsel for the Coca-Cola Company. The attorneys for the Coca-Cola Company make an annual report to Mr. Candler, or to the Coca-Cola Company as to the conduct of their part of the business and Asa G. Candler sees that report. A report of that kind was made on the 1st of January, 1915. Asa G. Candler did not issue any instructions that I know of to discontinue that practice. We are still continuing to do it. I don’t think any contract like those I wrote out in long-hand, or similar to plaintiff’s Rebuttal Exhibit No. 110 were procured in 1913. We didn’t start that until possibly around Christmas, 1914—yes, the latter part of 1913, November or December, 1913—yes, sir, those long-hand contracts. Reports of the procuring of those contracts were made to the Coca-Cola Company and to Asa G. Candler at the end of the year 1913, and no instructions were issued by him or by the officials of the Coca-Cola Company to discontinue the practice, so far as I know.

Mr. HIRSCH.—“I state in my place that an an-



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nual report is submitted to the Coca-Cola Company of all our acts and doings for the year; that none however, are submitted individually to Mr. Candler, they are delivered to the company, Mr. Candler is the president of the company. [1599] And I will state further that there has been no advice or recommendations or intimations from the Coca-Cola Company that we discontinue the practice concerning which the witness is testifying." A clause similar to that appearing in Plaintiff's Rebuttal Exhibit No. 118, which reads as follows: "That from this date Owsley & Beerman, of Kosciusko, Mississippi, will only purchase, handle, sell and dispense genuine 'Coca-Cola' syrup manufactured by the 'Coca-Cola' Company of Atlanta, Georgia, to the exclusion of any and all imitations or substitute beverages for 'Coca-Cola' " was included in all agreements that I made in long-hand. I don't believe they are included in other contracts, but their purpose is the same, though that they will not handle any other product as and for 'Coca-Cola'; it is so stated in that paragraph. The one hundred or more contracts which I have referred to have also embodied subsequently this language. "Nor will Owsley & Beerman, of Kosciusko, Mississippi, purchase, handle, sell or dispense, in any manner, shape or form any compound, extract, syrup, beverage, syrup or beverage, that can be used or sold as a substitute for Coca-Cola." Contracts embodying this language have been procured by me and my men on behalf of the Coca-Cola Company subsequent to October 15th, 1914, but



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not during 1915. You ask if the first time the Coca-Cola Company begun to endeavor to get dealers to sign contracts not to sell any product under the names "coke" or "dope" or under any alleged nicknames for "Coca-Cola," was when Plaintiff's Rebuttal Exhibit No. 110 begun to be used; no, sir; prior to that, 1913, when these written agreements was made by me. Yes, sir; I did get dealers to sign agreements not to sell any products [1600] under the name of "coke" and "dope" or similar to "Coca-Cola," the written agreements there show that. They show specifically that the dealers agree not to sell any product similar to "Coca-Cola" under the name "coke" and "dope"—some of them do and some don't. I don't find anything of that kind in Plaintiff's Rebuttal Exhibits Nos. 116, 117 and 118—it is generalized in the terms "imitations" and "imitation products." I myself have gone on the road to investigate and ask dealers what they understood by the words "coke" and "dope" in securing these agreements, and in so doing have covered Georgia, Mississippi, Texas, Arkansas, Alabama, North Carolina, South Carolina and Oklahoma. I should judge that I have visited about forty dealers in that territory. They were dealers on whom investigations had been made in connection with their business and reports submitted. The specific object of my visit was to secure these contracts. Yes, sir; I made agreement of that kind with dealers in the State of Texas. I did not make any such agreements with dealers in Texas who handled "KOKE" that I know of. I do

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not recall off hand the names of the dealers from whom we procured these contracts in Texas. There are somewhere in the files.

Q. 495. "I now ask you to produce and file all of the contracts which you procured from dealers in the State of Texas?

(Mr. HIRSCH.—"As counsel for the Coca-Cola Company I advise the witness not to produce them.")

"A. On advice of counsel I refuse to produce them."

I have attempted in other ways to find out the meaning of the words "coke" and "dope," namely, by coming [1601] in contact with thousands of people in my various travels. I have talked with dealers all over the South wherever I came in contact with them. I have come in contact with several hundred dealers. I did not determine whether or not they were dealers who handled products other than "Coca-Cola." They were just dealers who had soda-fountains in connection with their business, but whether they handled other products or whether they handled "Coca-Cola" exclusively, I don't know. I just run across them in a general way in going to their fountains and buying drinks for myself. You say that I spoke a moment ago of getting complaints from the Yellow Pine Pharmacy, and you ask what complaints I got; they were complaints submitted by the salesman of the Coca-Cola Company whose territory Hattiesburg, Mississippi, is in. You ask if he complained that they were not selling enough "Coca-

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Cola"; he complained that they were substituting imitation products for "Coca-Cola." Those complaints were repeated time after time. Oh, yes; invariably the only complaints we ever get are from agents of the Coca-Cola Company. We never get any complaints from the consuming public, we never search for them. You ask if it is a fact that when "Coca-Cola" salesmen come to make their rounds they figure that a man ought to have so much "Coca-Cola" at his fountain, and if he does not handle that much they make a complaint against him; I don't know about that.

Plaintiff's Rebuttal Exhibits 116, 117 and 118 are in my handwriting—in fact most of these contracts which I procured were written out by me in my own writing, so far as I recall. The notes I made, from which I have refreshed by recollection in testifying this morning, were usually written after I went back to my hotel. The contracts [1602] themselves were written in the presence of the persons signing them, but the reports were written afterwards, just merely a resume of what was contained in the agreement. I have examined the reports of my operatives, or rather, of those under my care, who went around through the country interviewing dealers as to the meaning of the words "coke" and "dope," and the only instance in those reports where anybody said that "coke" and "dope" did not necessarily mean "Coca-Cola" was a bottler somewhere in Mississippi. Out of the thousands of people they investigated that was the only one who stated that



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“dope” and “coke” were not nicknames for “Coca-Cola” exclusively and nothing else as applied to soda-fountain drinks. That is information they were sent out to get. That is what I instructed them to get.

Redirect Examination by Mr. HIRSCH.

Yes, sir; I heard that an appeal was taken in the case at Birmingham against Friend, Platt and Daniels. With reference to the general instructions given when the men under me went around to ascertain in regards to the names “coke” and “dope” being nicknames for “Coca-Cola,” I did not instruct the men as to what drug-stores to go into in each one of these cases. They were to take all the first-class stores in every town they visited with a population above a thousand. In every other investigation, both myself and the men under me are specifically instructed what stores to go to, and we do not go to any of the stores in these different investigations unless instructed to do so. I get my information from the Coca-Cola Company through their traveling salesmen and from those complaints received from the salesmen of the company. The men eventually—maybe, not then, but in the [1603] course of their travels,—go to that specific store and make a specific investigation as the circumstances of the case warrants. My men do not just go out at random—just to any place they want to go to—that was only in connection with the general investigation in regard to the definition of the terms “dope” and “coke.” I am asked if counsel for Coca-Cola

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Company had all the information in regard to the present suit a year before they were brought; no, sir; not a year. I meant to say an investigation was started about a year before suit was brought and then continued right on. I am asked how I formed my conclusion that these other products are imitations and substitutes; because of their general flavor and appearance. I am asked if there is any other reason and if they are substituted; well, they were actually substituted in a great many places which we have investigated as and for "Coca-Cola."

(Objected to by defendant because hearsay. Overruled. Exception.)

I never have seen any of these other products which I have referred to as imitations or substitutes advertised generally. I have never seen a piece of the advertising gotten out by the Koke Company of America, "only in evidence." I absolutely do not instruct any of the men that I have under me to threaten retailers, and the people they investigate with lawsuits or anything at all. They have no part of that at all, that is directly against their instructions and I don't believe it is done. The basis on which the suit against the Heinz Cigar Store was brought was fraudulent substitution. The question of "cope" and "dope" came into that suit by [1604] the defendants stating that they served these imitation products only when "coke" and "dope" was asked for at their fountains. In getting this agreement that has been referred to Exhibit 110, etc., these various agreements whether

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typewritten or written in my handwriting—I have the evidence before me to go by before I go out. The origin of the agreement is a complaint from the representative of the Coca-Cola Company after which the men are sent to that particular store with instructions to make a very thorough spigot test, which means they are to attach themselves to a disinterested witness preferably, if possible, a resident of that town—and then make the spigot test as I detailed on direct examination, and secure samples of the syrup dispensed as and for “Coca-Cola,” as heretofore recited. As soon as the samples are received I send them to our chemist for analysis in the condition in which they were received. In the course of a few days we get a report from the chemist as to his determinations of what the samples submitted are, and then if they happen to not be “Coca-Cola” we have one of our men go see this dealer. The men under me send in reports on all this absolutely every day. Oh, yes; I read these reports and the chemist’s reports absolutely. After we see whether or not the drink and samples were all drawn from the same container in the fountain, and if they were that determines that it is the understanding of the dealer that “Coca-Cola” “coke” and “dope”—and the sample being served as “Coca-Cola” is “Coca-Cola.” I then present these to counsel for the Coca-Cola Company for their approval and they always look over these and read the reports very carefully and then in [1605] their good judgment state what disposition they want made of each and



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every case. All that is gone through always before I start out with this agreement proposition. I don't go out at random after anybody and try to get an agreement. I understand that "coke" and "dope" mean absolutely "Coca-Cola," and no other product in the world as applied to a soda-fountain drink.

Recross-examination by Mr. LITTLETON.

I have never seen any of these products which I term imitations of Coca-Cola advertised generally, with the exception of possibly the bottled products, the bottled product Chero-Cola, and that is only recently. I have only seen Chero-Cola advertised in two or three states and that is only in the last two or three months. I have seen it advertised pretty extensively throughout Georgia and some portions of Alabama—Birmingham, for instance. No, sir; it is not advertised extensively along railroad tracks. Occasionally in towns and sometimes along the railroads you will see a sign along *sign* wall, something of that kind. Within the past five months they have been doing a great deal of display advertising, great big signs on the sides of buildings. No, sir; I have never seen any advertising of "Gay-Ola." I have never seen any "Gay-Ola" advertising along the Queen & Crescent Railroad system throughout Mississippi. You ask if I don't consider all products, all of the various cola drinks on the market, that is, drinks similar to Coca-Cola in color, taste and appearance—as imitations of Coca-Cola, and as substitutes for Coca-Cola; no, sir; not all [1606] of them. You ask which ones do I not so consider;



(Deposition of H. B. Pierce.)

well, Chero-Cola. I don't know whether or not the Coca-Cola Company has a suit against them. That is about the only one that I do not consider an imitation of and a substitute for "Coca-Cola." All the others—all that have come to my knowledge—I consider imitations of and substitutes for "Coca-Cola." I make a distinction between "Chero-Cola" and "Coca-Cola" and not between the other cola drinks because "Chero-Cola" has an entirely different flavor. It has a greater difference in flavor from "Coca-Cola" than "Rye-Ola." "Chero-Cola" don't taste anything like "Coca-Cola." It has an entirely different taste. It is an entirely different drink. It simply tastes like "Chero-Cola" and nothing else. You ask if every other cola drink on the market more closely resembles "Coca-Cola" in taste than does "Chero-Cola"; they are all about the same. You ask if I don't put "Chero-Cola" in this class of drinks; yes, sir; I believe "Chero-Cola" with a little off flavor is in the same class of drinks. You ask if it has a flavor resembling "Coca-Cola" at all in any respect; yes, it resembles "Coca-Cola." Still, it has a slightly different taste to those who are familiar with "Coca-Cola." It is about the same color as these other drinks and is put up in bottles, almost identical in size with the "Coca-Cola" bottles, and has a cap on it about the same size as the "Coca-Cola" cap, and just at a casual glance would look about like a bottle of "Coca-Cola." It can be substituted for "Coca-Cola," and no doubt is. You say that notwithstanding that fact I don't consider it an

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imitation of "Coca-Cola"; you asked what I thought about its [1607] flavor, and I told you it has a slightly different flavor; if you ask what the trade means, I probably can't answer your question. I don't consider it an imitation of "Coca-Cola" myself, directly. Yes, sir; I consider it an imitation indirectly. You ask if I consider it a substitute for "Coca-Cola." It can be substituted for "Coca-Cola." Yes, sir; I believe I consider any drink which could be substituted for "Coca-Cola" as a substitute for "Coca-Cola" an imitation thereof. In its primary purpose I believe "Chero-Cola" also is an imitation of "Coca-Cola" and a substitute therefor; it was so conceived. I have no doubt that "Chero-Cola" is being substituted continually for "Coca-Cola." My understanding is that it is sold only in bottles. I believe that "Chero-Cola" bottles habitually have a label on them. The label is a bright yellow with the name "Chero-Cola" on there in red and within the last two or three months it is printed in block letters. Before that they had a diamond-shaped label with yellow body with the name "Chero-Cola" in Script—direct imitation of the "Coca-Cola" label. They had that, I should judge about two years. They had that on a yellow label and the name appeared in red. The name of the drink, "Chero-Cola" was also blown into the glass in the bottles. Their new bottles, I understand, have the name blown into the sides in block letters. In a great many other instances I understand it is script type. They use all script crowns

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however; they have not changed those, that is not up to a few days ago. Yes, sir; that script resemble "Coca-Cola" in my opinion absolutely. A good imitation of it. The other cola drinks which I know of, which have that same script, are [1608] "Wise-Ola," "Rye-Ola," "Gay-Ola," "Glee-Nol," "Cola-Nip," "Ala-Cola," "Nifty-Cola," "Celery-Cola," "Luck-Ola," "Pepsi-Cola," "Tru-Cola," "Lemon-Cola." I believe "Mo-Cola" is in block letters, I am not sure about that. To my certain knowledge these concerns have been using this style of script two or three years. That is the first time I observed them particularly. I do not know and have no idea how many cola drinks there are on the market. I know of possibly fifteen or twenty. Yes, sir; I have heard of "Amer-Cola," made in America, Georgia. "Uncle-Sam," I don't consider a cola drink, it may be, I am not familiar with it. All of these cola drinks I have known of, all have about the same color, and are put up in about the same kind of bottle and have pretty much the same general taste. In the course of my investigations I have run across a good many dealers who stated they put simple syrup in their "Coca-Cola," but I don't personally know that to be a fact. My investigations didn't run along that line. I cannot determine that. We believe it is being done, but as to absolutely knowing it, I cannot state that. It is the general practice, I think. I say it has been practiced generally—that is up to a few years ago, when it was called to the attention of the dealers that it was not permitted by



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the Coca-Cola Company, and now we have very few cases reported to us where that is done. I decided to add that amended statement to my answer, because that is the truth of it. I am asked if I saw Mr. Hirsch nod to me—

(Mr. HIRSCH.—“The accusation of counsel is absurd and it is absolutely rank to say that I would sit here and *coaching* the witness.”) [1609]

(Mr. LITTLETON.—“I would say this, I observed Mr. Pierce look at Mr. Hirsch, I was not looking at Mr. Hirsch.”)

(Mr. PIERCE.—“I was not looking at Mr. Hirsch, he was not within my vision at all.”)

(Mr. LITTLETON.—“And I state that the witness was looking at Mr. Hirsch, and that is the reason I asked him the question over again, and then after he thought a minute the witness added that to the end of his statement.”)

(Mr. HIRSCH.—And I wish to state that at the time that statement was made I looked at my paper and made a note of something to examine him on.)

(Mr. PIERCE.—And the witness states when the second question was asked he looked directly at Mr. Littleton.)

(Mr. LITTLETON.—I state in there, I think that's true when I asked him the second time.)

(Mr. PIERCE.—And that is the only time that the witness looked at either Mr. Hirsch or Mr. Littleton.)

No, sir; in my rounds I have not had dealers frequently admit to me that they had put simple syrup

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in "Coca-Cola." Yes, sir; I have had some of them admit to me that they did that. I have never made any investigation or observed the customs of the trade, in bottled beverages. I don't know anything about what terms people use in asking for these various bottled goods except the investigations made by our investigators. Personally I have not made any investigation of that kind outside of casual inquiry. Oh, yes; I have witnessed the purchase and sale of these cola drinks other than "Coca-Cola" in bottles time after time at various places. Yes, sir; I have heard people ask for "coke" and "dope" and have seen some of these other drinks served to them. No, sir; I did not observe any one who asked for "coke" or "dope" served with [1610] "Cherro-Cola" or with "Star-Cola," or with "Rye-Ola," or with "Ala-Cola," that I know of, I don't recall a specific drink it may be any one of them or all of them.

Re-redirect Examination by Mr. HIRSCH.

No, I didn't mean to say that the practice of putting simple syrup in "Coca-Cola" is general. I meant to say that practice had been general up to about two or three years [1611] ago, and we brought it to the attention of the dealers that the Coca-Cola Company wouldn't permit any tampering with their product. No, I didn't mean to say that everybody did it, I meant to say that people who were substituting did it and mixed other products with "Coca-Cola." When I stated that the prac-

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tice was general of putting simple syrup in "Coca-Cola" that was an inadvertent answer. I meant in that respect that about two or three years ago there was a number of dealers conducting soda-fountains that used to make it a practice of adding simple syrup to their "Coca-Cola," and that practice was called to their attention in various ways, both by this department and by representatives of the Coca-Cola Company, and was discontinued generally all over the country. No, sir; I don't know of my own knowledge of anybody ever doing that. No, sir; I didn't make any analysis of the "Coca-Cola." With reference to this script on the numerous drinks which I have enumerated, I am asked whether that script on any of these drinks has been discontinued after attention was called to it by this department. Yes, sir; I believe it has. "Cherro-Cola" is the only one of these drinks that I know of that is advertised generally and that is only within the last four or five months. No, not to my knowledge have I ever seen any bottled product served in response to orders for "coke" and "dope" except "Coca-Cola." I couldn't say whether it is "Coca-Cola" or not.

Re-recross-examination by Mr. LITTLETON.

Yes, I told you that I had seen other drinks besides "Coca-Cola" served in response to orders for "coke" and "dope." No, sir; that was not true, that I know of. In thinking of [1612] it specifically, I could not say what it was. I couldn't say that the drink I saw was not "Coca-Cola," because I didn't drink it, and even if I had, possibly I



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couldn't tell it. From all appearances it was "Coca-Cola." Sure, I know a "Coca-Cola" bottle when I see it. No, it is not a distinctive bottle. No, it is not distinctive. No, "Coca-Cola" has not a distinctive bottle, not in its present form—it is distinctive in as much as it has the trademark "Coca-Cola" blown in script on some part of the bottle and that is the thing that distinguishes it from all the other bottles on the market—not all of the bottles, there are some bottles that have a different size and shape. I have not seen "Coca-Cola" in any bottle that did not bear the trademark blown in the bottle. Recently I have seen "Coca-Cola" with another cap on it, and in a bottle other than a "Coca-Cola" bottle. I saw the exhibits filed in this case. The script of "Coca-Cola" is distinct from the other script of these other drinks I have mentioned, in that it has a special design of its own, "Coca-Cola," the words in which they are written, in which they are blown on the bottle, or in which they are used as advertising. You ask if in my mind it is different from those names on the other bottles—"Rye-Ola," for instance. Well, of course, the name is different, but the script is the same. The names do not look alike when you see them together. I personally would not take them as the same thing. If I only saw the word "Cola" in "Star-Cola," I would take it to be "Coca-Cola." If I saw the whole name, "Star-Cola," I would not. The name [1613] "Chero-Cola" does not look to me like "Coca-Cola"—it would if I only saw the word "Cola."



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Re-reXQ. 755. "Does the name "Dope," as it appears on the caps of the defendants' bottles look like the name 'Coca-Cola'?"

A. "Only the script, or style of letter used."

Re-reXQ. 756. "Does the style of the letters in the name 'Dope' as used on the caps of the defendants' bottles look to you like the style in which 'Coca-Cola' is written?"

A. "Yes, sir."

Re-reXQ. 757. "You think that is the same style of script?"

A. "I think that is the same style of script,—the same lettering."

Re-reXQ. 758. "Do you think you would mistake that for the name 'Coca-Cola' on the crown of the bottle?"

A. "Not I, I wouldn't."

Re-reXQ. 759. "Do you think anybody would?"

A. "They may, I don't know."

Re-reXQ. 760. "Do you think any rational being, anybody with common sense, would?"

A. "I don't know."

(Mr. HIRSCH.—"I object to that, he don't know what a rational being with common sense would do.")

Re-reXQ. 761. "Would you mistake the "KOKE" written in caps on the defendants' bottles for the name 'Coca-Cola'?"

A. "No." [1614]

If they are in script I might mistake the labels on the "Chero-Cola" bottles for the labels on the "Coca-

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Cola" bottles. I think I would mistake the script labels that are now pasted on "Chero-Cola" bottles for the "Coca-Cola." In some cases there are labels used by "Coca-Cola" bottlers, but in most cases no labels are used. I don't know why the labels are not used, but I have been told that the trade objects to them particularly the trade that has ice boxes, because the labels come off and stop up the drain pipes. They use a uniform label I believe, in cases where they do use labels. The body of the label is blue, and the name "Coca-Cola" is written on there in blue. The "Chero-Cola" label is yellow, and the name "Chero-Cola" is written on there in red. No, sir; I would not mistake that "Chero-Cola" label for the "Coca-Cola" label. I have seen some "Chero-Cola" bottles that were labeled and others that were not. I knew they were "Chero-Cola" bottles on account of the name "Chero-Cola" being blown in them. I couldn't distinguish them unless I saw them, yes, sir. In those cases where they had labels I could readily distinguish them on account of the color of the labels. I have never brought any "Chero-Cola." Yes, sir; I have had other people buy it for me. The bottle goods. You asked how much "Chero-Cola" I ever drank, and if I ever drank much of it; I never bought any of it, and I never drank any "Chero-Cola" to my knowledge that I know of.

Re-reXQ. 785. "And yet you say that it has a different taste from 'Coca-Cola'?"

A. "I have too,—I recall, now, at Macon during

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the [1615] State Fair, I did."

I have tasted "Cherro-Cola" on a number of occasions, I have never drank it, what you might say, in complete bottlefuls. I have taken two or three mouthfuls or one mouthful on a number of occasions, I did at Macon a couple of years ago at the State Fair down there, bought a couple of bottles of "Chero-Cola" during the afternoon. I have tasted "Chero-Cola" on a number of occasions, that is a mouthful, I have done that repeatedly. I have seen "Chero-Cola" sold when "Chero-Cola" was asked for. I have never heard any of these other drinks asked for by their right names. I have heard them asked for as "dope" and "coke." When "dope" and "coke" are asked for I have seen a product served. I don't know what it was. No, I have never witnessed the sale of any product in bottles other than "Coca-Cola" to any purchaser who asked for "coke" or "dope." Yes, sir; I am familiar with "Coca-Cola" bottles and the caps on them and the labels, and am in the investigating business, but I couldn't positively tell that those bottles were not "Coca-Cola," because they were of the same general appearance of "Coca-Cola." I never saw the caps on the bottles, I never saw any with the labels on them, and I never saw the names of any of them blown in the glass. For all I know they may be selling all these drinks to purchasers who ask for "coke" and "dope" and "Coca-Cola." I believe "Chero-Cola" is sold when "coke" and "dope" are asked for. I don't know whether these concerns



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who formerly used script and discontinued it, discontinued the use of that script rather than have a lawsuit with the Coca-Cola Company. I do not know whether or not the Coca-Cola Company, or its [1616] counsel or anyone connected with the Coca-Cola Company, ever intimated to those people, that if they didn't discontinue the use of that script they would be sued. I am acquainted with the size, shape and general appearance of the bottles in which "Coca-Cola" is bottled and sold in Atlanta, Georgia. I believe it is a six and one-half ounce white bottle. I do not remember to have seen cola drinks served in bottles of any other shape besides that. Amber bottles are used by some of the bottlers of "Coca-Cola" up in the northwest territory. You say that I didn't catch your question, and that you asked me if I had ever seen any other cola drinks other than "Coca-Cola" offered for sale in bottles of a different shape from the character of bottle used by the Coca-Cola Company of Atlanta, in the bottling of "Coca-Cola"; I hadn't observed that only when they were put in evidence down in New Orleans—also in Dallas—I observed it then. I believe the bottlers of these various cola drinks use various sized bottles. You ask if I have ever noticed any of these cola drinks offered to a customer in bottles which differed in size, color and general appearance from "Coca-Cola" bottles; I never particularly noticed that—never observed it particularly, never gave the matter any thought at all. I never observed the sale of any of these cola drinks other than "Coca-Cola in bottles

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to my knowledge—not particularly no. You ask if there is any way of telling from the size, color, shape, design and general appearance of the bottle whether or not it contains “Coca-Cola” or one of these fourteen or fifteen drinks which I have mentioned; the licensed bottlers of “Coca-Cola” always use the trademark “Coca-Cola” [1617] bottles, and that is the way I distinguish those from the other drinks. You ask if that is the way I distinguish the “Coca-Cola” bottles, notwithstanding the fact that “Coca-Cola” looks like these other names; that is the way I distinguish it—what the public may do is another matter; the public is not as well informed about that as I am. When I went into a store and a bottle was handed to me, I could tell right off by looking at it whether it was “Coca-Cola” or not, if I saw the whole name. You ask if just a glance would not show the name if it was served over the counter or stand where I was, that would depend on the angle at which the bottle was handed to me. I might take a “Chero-Cola” bottle and look at one angle of the shoulder of it, and wouldn’t know whether it was “Coca-Cola” or not, it depends on the angle of the bottle as it is handed to me. If it were just casually handed me, I would be less likely to observe the difference—I myself with all my knowledge of “Coca-Cola” bottles and its business, of course, I could tell it. No, I have never at any time observed a purchaser who asked for “dope” or “coke” served with a cola beverage in a bottle which I knew, or had good reason to believe

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either from the appearance of the bottle or from the name or the label or the cap was not "Coca-Cola."

[1618]

**Deposition of I. B. Drawley, for Plaintiff (in Rebuttal).**

I. B. DRAWLEY.

Direct Examination by Mr. HIRSCH.

I am thirty-three years of age; reside in Huntsville, Alabama, where I have been living since April 12th. I visited the Davis-Fuston stores in Nashville, with C. C. Ross, at which places we made "spigot tests," that is, to say, one of us called for "dope" or "coke" and the other for "Coca-Cola," and we noted what container the syrup was drawn from to make the drinks thus requested. We noted if they were all drawn from the same container, in all the stores we visited. In all of the calls at the Davis-Fuston stores the syrup was in each instance drawn from the same container. We then went to the place of business of what is known as Mathews Ha-Ha-Store, where we called for a "dope" or "coke" and "Coca-Cola," and observed that the syrup drawn to make the drinks we ordered was drawn from the same container in response to all three orders. We then went to the place of business of Fried & Haas three times. The first time we went there the syrup used to make the drinks served in response to calls for "dope" or "coke" was drawn from one container, and the syrup to make the drink served in response to "Coca-Cola" was drawn from a different



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container. We then went back about four o'clock and one of us asked for either "dope" or "coke," and the other for "Coca-Cola," and this time the syrup used for making the drinks served in response to both requests was drawn from the same container. We went there again about six or seven o'clock, and again asked for "coke" or "dope" and "Coca-Cola," and they got them from the same container. We then went to the Warner Drug [1619] Store at Nashville, and called for "dope" or "coke" and "Coca-Cola," and the dispenser got the syrup for both drinks out of the same container. We went there four different times, and each time the same thing happened. We went to the Nashville Drug Company and ordered "dope" and "coke" and "Coca-Cola" and they served us bottled "Coca-Cola" in response to each request.

Cross-examination by Mr. LITTLETON.

I am with the Gulf Refining Company, at Huntsville, Alabama, as local agent. I have held the position since April 12th, this year. Prior to that time I was with the International Shoe Company at St. Louis, as superintendent of the Marshall, Missouri, factory, and cost man, which position I held for seven years. I lost my position there when the Marshall factory closed down. I was never a detective, and don't consider the kind of work I have detailed in my direct examination as detective work. I consider it just extra work, special work. I had never engaged in special work of this kind before. Mr. Ross advertised in a Nashville paper for a man for

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special work and I answered the advertisement. I was in Nashville at the time looking for employment. I was going from there to Corinth, Mississippi. I had been out of employment about two weeks, had just come from St. Louis down to Nashville. Mr. Ross paid me three dollars a day for this work. I was engaged altogether two days in making these investigations. We visited either two or three of the Davis-Fuston stores, I don't know whether we visited these Fuston stores first or not. We visited them sometime during those two days. I don't [1620] remember whether we visited them before we visited the other stores or not, or which one we first visited. I do not recall about when we visited the first Davis-Fuston Store, I may have to refer to my memorandum here, I cannot answer that without referring to my memorandum. Yes, sir, I have an independent recollection of these transactions outside of my memorandum. You say you want to see if I can testify without looking at my memorandum, and ask if I recall about the time of day when I visited the first Davis-Fuston Store. I don't remember whether it was February 9th or 10th. I don't remember whether it was morning, afternoon, or night. I don't remember whether it was I who asked for "dope," or whether it was Ross. I don't know which spigot the syrup was drawn from, but they were both drawn from the same spigot. I don't know which one it was, or whether it was to the right or left of the carbonator arm. I don't know the name of the dispenser on duty. I don't know what drink it was

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that was served to me, I called for one and Ross for the other, and we both got the same. I don't know whether it was "Coca-Cola," I suppose it was "Coca-Cola." I don't believe I could tell the difference between genuine "Coca-Cola" and these substitutes. You ask if they all taste exactly alike to me; I don't drink very much of them. You ask if they all taste exactly alike to me, regardless of the fact whether I drink much or little; I don't know, because I am not a judge of them. I think the first Davis-Fuston Store we went to, I think it was the Fuston Pharmacy out on Mulberry and 4th Streets—my recollection is that when I called for my drink it came out of the spigot labeled "Coca-Cola." I don't recall which it [1621] was I asked for, whether it was "dope," "coke" or "Coca-Cola." Either Ross or myself asked for "coke" or "dope," and the other asked for "Coca-Cola." I don't know which asked for which. I don't recall whether it was "dope" that was asked for or "coke" that was asked for. I know that we both didn't ask for "Coca-Cola," because we both didn't do it. I am positive that we didn't. No, sir, I do not readily recognize the difference between the name "dope" and the name "Coca-Cola." I don't recognize any difference between those names. You ask if they sound just alike to me; well, they mean the same thing. You again ask if they sound just alike to me; no, but they mean the same thing; no, sir, they don't sound alike; no, sir, the words "dope" and "Coca-Cola" don't look alike. They mean the same thing to me, yes, sir. "Dope" and



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"Coca-Cola" have the same meaning to me. If I would go into a drug-store and call for "dope" or "coke," or "Coca-Cola," I would have in mind "Coca-Cola."

(Mr. LITTLETON.—"That is not what I am asking, and I move to strike the answer as not responsive to the question.")

(Objection overruled; exception.)

You ask if, in my opinion, "Coca-Cola" is a "dope," to my mind; well, I don't know, I don't know whether it is or not. I call it "dope" because they mean the same to me, that is the reason. That name "dope" has no meaning to me whatever. Yes, sir, I have heard people speak of "the 'dope' on the baseball game." I don't know what it means in that connection because I don't follow baseball. Yes, sir, I have heard of "dope-fiends," and morphine-fiends, and cocaine-fiends. Yes, sir, I have heard the expression "dope-fiend" applied to any of those. [1622] Yes, sir, I have heard of "the 'dope' on the horse races," but I don't know what it means. Yes, sir, I have heard drugs referred to as "dope," such as morphine, cocaine, and drugs like that. You ask if "dope" means that to me also; why, it is just as I stated—my meaning of the word "dope" is rather vague. It means a whole lot of things. You say it has a meaning, then; well, it is vague to me. If I heard of a drink called "Lemon-Orange," I would naturally conclude from the name of the drink, that it would have something in there that tasted like lemon and orange, it seems to me. If I heard a drink

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called "Lemon-Cola," I would naturally conclude, from the name that there was lemon about it. I don't know just exactly what cola is. I presume it would have a lemon flavor. I don't know. When I hear a drink called "Coca-Cola," I would think it had coca in it. You ask if I would think the principal characteristic ingredients were coca and cola; I never thought about that. You say that I said "dope" and "Coca-Cola" mean the same thing, and that I have given several meanings of "dope," and you ask me now to give my meaning of "Coca-Cola"; well, "dope" and "Coca-Cola" have always been associated in my mind—if I go into a soda-fountain and ask for "dope" or "Coca-Cola," I would expect to get "Coca-Cola," whether I called for "dope" or or "Coca-Cola." I have lived in St. Louis a number of years. You ask if the word "dope" is used out there frequently; well, I use it. I don't know how long I have used the word "dope." I suppose I first got to applying that word "dope" to "Coca-Cola" because I heard some one else use it. Yes, sir, I have heard that "Coca-Cola" has some drug in it. I don't remember [1623] just what drug it was, but I have heard it referred to as having a drug in it. I have never heard it referred to as having cocaine in it. I don't know what the drug was. You ask if the name "dope" has any sinister meaning to me; well, not particularly. "Dope" might under certain conditions and used in certain ways, suggest a drug or narcotic. No, sir, I did not take away any samples of the syrup served in the places where I visited



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in Nashville. I drank what was served me. No, sir, Mr. Ross did not take any syrup away, either. I don't remember just in what sequence we visited the different stores. I don't remember whether at the Mathews Ha-Ha-Store I ordered "dope," "coke" or "Coca-Cola." That store is in the Arcade. I don't remember the time of day I went there. I think we went there on both days, I know we went there two times. We went to the Fuston Pharmacy at Mulberry and 4th Streets, twice, and I think one place we didn't go to but once, but just which one it was, I don't remember. I went to Fried & Haas' three times, and to the Warner Drug Store, at the corner of Celar and the Public Square, I think four times. I don't know who any of the dispensers at any of these places was. I don't know whether Ross found out who they were or not, we both went in together. I don't remember which I asked for at the Mathews Store, whether it was "dope," "coke" or "Coca-Cola," nor do I remember which it was Ross asked for. You ask if I don't think I was liable in thinking of it afterwards, in my memory, to get the names confused, inasmuch as "dope" and "Coca-Cola" convey the same idea to my mind; I don't think so. You ask why; well, because I don't, I have no reason and no explanation of that, whatever. These investigations [1624] we made were on February 9th and 10th. You say that though these names mean the same thing to my mind, and are absolutely alike and synonymous, yet, four months after the investigations are made, I am able to distinguish which



(Deposition of I. B. Drawley.)

name was which and to remember that one was asked for and not the other; yes, sir, I think so. Yes, sir, I am able to carry the distinction between the names in my mind that long. I remember that we both didn't ask for the same thing. Yes, sir, it is a fact that we started out with the intention of not asking for the same thing, and we didn't do it, either. I think I always asked for the same thing at all of the places we went to—and I think he always asked for the same thing. We did not switch around. I think we asked for the same thing, I know so. I asked for the same thing at every place we went to, and he asked for the same thing at every place we went to.

XQ. 190. “Now, if you asked for the same thing, can't you remember it? A. No, sir. I cannot remember whether it was agreed that I was to ask for “dope” and he was to ask for “Coca-Cola” or not. I cannot remember whether it was agreed that I was to ask for “coke” and he was to ask for “Coca-Cola” or not. Yes, sir, I remember the spigot from which the syrup was drawn at the Ha-Ha-Store, it was drawn from the middle spigot. I remember that. My recollection is there were five spigots and it was drawn from the center. My remembrance is that there was only five spigots at that fountain. I recall that specifically because I did a good deal of loafing around the [1625] Arcade at night. On our first visit to Fried & Haas they drew “dope” and “Coca-Cola” from different containers. I don't remember which container they drew the “dope” from, or which they drew the “Coca-Cola” from. Nor do

(Deposition of I. B. Drawley.)

I remember the container they drew it from on the subsequent visits, nor the name of the dispenser. The second time we visited there was about four o'clock and the third time around six,—probably between six and seven o'clock. I did not notice what the containers were labeled. I did not notice the location of the container from which the syrup was drawn at the Warner Drug Company, nor do I remember what the label was that was on it. I don't remember what kind of fountain it was, or how the spigots were arranged. I went there in the morning, once. I made a visit in the afternoon there, I think the same afternoon, but I don't remember about what time it was in the afternoon. The Warner Drug Company is located, I think, on the corner of Cedar Street and what is known as the Square. At the Nashville Drug Company there was no syrup drawn. We went to two stores of the Nashville Drug Co. and at both of them they served bottled "Coca-Cola." I knew it was bottled "Coca-Cola" because it had "Coca-Cola" on the crown. I recognized it right off as "Coca-Cola." You ask if I have ever seen any of these other cola drinks, the bottles in which they are put up; I believe I have seen "Gay-Ola." I have not noticed the crowns on the bottles. I don't remember whether there was any labels on those bottles of "Coca-Cola" or not, aside from the crowns. Yes, sir; I drank it. I don't remember what kind of fountain they had at the Nashville Drug Company where they served us this bottled "Coca-Cola." I presume that we did go up to the fountain,

(Deposition of I. B. Drawley.)

and one of us asked for "Coca-Cola." I don't recall, though, whether we did or not. No, sir, they did not serve [1626] us "dope" at the fountain, but served "Coca-Cola" out of the bottles. I said we either called for "coke" or "dope" and "Coca-Cola," and they served us bottles of "Coca-Cola" in response to those requests. I don't know whether I saw anything in the fountain that looked like "Coca-Cola" syrup or not. I didn't see anybody while I was there served anything out of the fountain. I suppose they did not know we were making these tests, because we didn't tell them we were. I suppose they gave us bottled "Coca-Cola" instead of giving us soda-fountain syrup, because I saw the bottles. No, sir, we did not ask for a bottle of "Coca Cola." We just asked for "Coca-Cola" or "dope," whichever it was. My recollection is they said the fountain was closed for the winter. They were not operating that fountain. I don't know whether they had anything else but this bottled "Coca-Cola." I didn't see anything else there. Yes, sir; I was paid as soon as the services terminated, and I don't know anybody else who assisted Mr. Ross in this kind of work. [1627]

**Deposition of Frank Keane Birch, for Plaintiff (in Rebuttal).**

FRANK KEANE BIRCH.

Direct Examination by Mr. HIRSCH.

I reside at 205 South Ash Street, Greensboro, North Carolina, and am twenty-six years of age. I



(Deposition of Frank Keane Birch.)

have resided in Greensboro since March 10th of this year. I formerly resided at Spartanburg, South Carolina and was there on or about December 30th, 1914. I know a Mr. Frank Platt and I went with him to the K. W. N. Pharmacy, at Spartanburg on or about December 30th, 1914. We went up to the fountain and I asked for "Dope" and Mr. Platt asked for "Coca-Cola." The syrup to make the two drinks asked for by Platt and myself was drawn from the same container. I asked the dispenser to give me an eight or ten ounce bottle of "Coca-Cola" syrup. The bottle marked Exhibit No. 121 has a label on it which bears my signature. I saw the label pasted on that bottle and saw the bottle sealed. The syrup which the dispenser gave me in response to my order for "Coca-Cola" was placed in that bottle before it was sealed. I made no change in the syrup whatsoever. I then gave the bottle to Mr. Platt. Mr. Platt wrote out that label in my presence.

(Plaintiff here tendered and offered in evidence the bottle and label referred to as Plaintiff's Rebuttal Exhibit 121.)

Cross-examination by Mr. LITTLETON.

I am a soda dispenser at Greensboro, North Carolina, employed by Mr. Birkhammer. I was not engaged in any business at Spartanburg. I was not working from November to March. No, sir, Spartanburg is not my home. Prior to that I traveled on the road in the carnival business for myself [1628] as concessionaire. It was one of the street fairs. I was manager of my concession. Yes, sir,

(Deposition of Frank Keane Birch.)

I was performer. I did what was to be done. In other words, I was a demonstrator. The concession I had was a game of science and skill, operated with five red blanks. These are round red circles of certain dimensions, and disks are supposed to be dropped above the circles and cover them without moving the plates, and on doing so you get a prize. If it does not land on the right place you don't get anything, unless you cover it according to the rules. No, sir, it is not necessarily a gambling device. It is winning, not gambling. It is a game of science and skill. You ask if it is not gambling according to the laws of some states. In some places they took out an injunction against me, and in some I lost too much when I operated. The skill in that game comes in in dropping those plates accurately. I have been in that business for the past ten years. I am now twenty-seven years of age, and, consequently, started in that business when I was seventeen. Neither of my parents is living. I made my living during the six months I was out of employment in Spartanburg by living with my wife's folks. I have been married since July 23d, 1914. I happened to go around and get this bottle marked Plaintiff's Rebuttal Exhibit No. 121, because I was asked by Mr. Platt to purchase it. I was introduced to him by a friend of mine, Mr. John Tinsley, of the "Spartanburg Journal." Mr. Platt told me he was making an inquiry of some description but did not go into any details. I remained in his employ long enough to go to three stores, namely, the Bishop Store,

(Deposition of Frank Keane Birch.)

Oakland Drug Store, and the K. W. N. Pharmacy. I went to the K. W. N.     [1629] Pharmacy in the neighborhood of 3:30 or a quarter until 4 in the afternoon, as near I remember. Mr. Platt went into the drug-store first and I come in after. Yes, sir, I certainly did hear what he asked for, he did not ask for anything until I came in. He stood at the fountain and I walked in after. He just happened to go in first before I did; it was not a prearranged matter. He asked for "Coca-Cola" and I asked for "Dope" at the K. W. N. Pharmacy. I believe I have memory enough to remember that. I go over every detail that happened during the time that he and I were together. I am the one who bought the syrup. Mr. Platt wrote the label on the bottle. This is the bottle the syrup was originally put in, as far as I remember. It formerly belonged to the K. W. N. Pharmacy. I don't exactly know the impression that was put on the seal, but I know the bottle was sealed in my presence. I walked out of the drug-store down in front of the fire-house on Broad Street and it was sealed in front of the firehouse, about three minutes after I left the K. W. N. Pharmacy. No, I did not have sealing-wax with me, but Mr. Platt did. He stopped in the middle of the street on a pile of lumber that was stacked in front of the firehouse and sealed it up. The label was written out on the board and put on the bottle at the post-office where we got some muscilage. The postoffice is about five minutes walk from the pile of lumber. The spigot this syrup was drawn from was the sec-



(Deposition of Frank Keane Birch.)

ond container to my right, the second container from the carbonator which goes up in the middle of the fountain. I did not notice the name on the container. The soda-fountain was located on the left of the store as [1630] you enter. I do not know how many spigots they had in the fountain, nor do I know how many carbonating arms they had. They just had one big thing in the middle and four or five carbonators on the column. There were not two on that soda-fountain. The seal on this bottle is now broken, the stopper comes out easily.

(Mr. HIRSCH.—“I admit the seal was broken before it came into this room.”)

No, sir; I would not swear that what is in that bottle was the identical contents that I placed in it. All I know is I got some syrup in a bottle like that, and that that label, with my signature, was pasted on it. I made this purchase on or around the last day of December, 1914. I just visited the K. W. N. Pharmacy once and made one visit to Bishop's Store. I got the stuff at Bishop's Store before I went to the K. W. N. Pharmacy. I have stated all that occurred on my visit to the K. W. N. Pharmacy,—all that was said by anybody, either by me or Platt, or anybody else, or by anybody else to us. I have stated anything that was said by anybody.

At Bishop's Store I walked in and asked the dispenser to give me some “Coca-Cola” syrup in a bottle. He would not sell it to me, but Mr. Bishop did and gave it to me. I made the visit to Bishop's Store at least ten minutes before going to the K. W.

(Deposition of Frank Keane Birch.)

N. Pharmacy. We went from there and sealed the bottle we got at Bishop's and walked directly to the K. W. N. Pharmacy. We sealed the bottle we got at Bishop's in the street one block further up, before we went to the K. W. N. Pharmacy. We sealed it in the same place we did the bottle we got at the K. W. N. Pharmacy, and put the same kind of a label on it. Mr. Platt put that bottle in his pocket. No, he did not have it in his pocket when we went to the [1631] K. W. N. Pharmacy. He went to a certain place he had and deposited it there. I did not go with him. Yes, sir, he left me between the time we went out of Bishop's Store and the time we went to the K. W. N. Pharmacy. The place where he deposited it was Burney's, which is a soda-fountain and drug-store and lunch-counter combined. After he got Plaintiff's Rebuttal Exhibit 121, he kept it in his pocket until we went to Oakman's. I don't know what he did with it, because I left him in the postoffice after the purchase from Oakman's. I asked for "Coca-Cola" syrup at Bishop's when I went in there to get my drink,—when I first went in I asked for "Coca-Cola" and Platt asked for "Dope." We just reversed the process at Bishop's Store. I remember that at the Bishop place I asked for "Coca-Cola" and that I asked for "Dope" at the K. W. N. Pharmacy, whereas Platt asked for "Dope" at Bishop's Store and for "Coca-Cola" at the K. W. N. Pharmacy, because that is the way it happened. There was no prearranged affair. I recall distinctly that is the way it happened. There

(Deposition of Frank Keane Birch.)

could not be any possible mistake about it, to my mind. We went to Oakman's about ten minutes after leaving the K. W. N. Pharmacy. Oakman's is in the opposite direction from the firehouse. We went to the firehouse and sealed the bottle and then over to Oakman's, at which place I asked for eight or ten ounces of "Coca-Cola" syrup. I did not buy any drink at Oakman's. Platt bought one there but I don't know what he asked for. I was in the back of the store talking to Mr. Oakman. I did not notice the particular spigot from which the syrup was drawn to make my drink at Bishop's, but I know it was drawn from the fountain. No, sir, Mr. Platt [1632] did not explain to me what he wanted to get this syrup for. He told me he wanted me to purchase him some syrup. He said the syrup was being substituted, he said an investigation was being made, some tests, and he wanted to purchase some syrup and had to have a witness to get it. He paid me two dollars for my services. I just operated three hours on one day. I visited no other places in Spartanburg, nor did I visit any other place anywhere else. Nobody else was with me besides Platt. No sir, I did not meet F. C. Peace while up there, I never met him until to-day. I met him to-day and I believe I met all these other gentlemen here, and he is one of them. We have all been sitting in the room out there together and walking around the building in different places. I came to Atlanta last night at six o'clock from Greensboro, North Carolina. I came upon instruction from Mr. Allen of the Spartanburg



(Deposition of Frank Keane Birch.)

Coca-Cola Bottling Company. Mr. Allen instructed Mr. Harrison to send me down here. No, sir; I do not necessarily go wherever the Coca-Cola Company tells me. This is the first time I have been asked to come here. They paid my way down here and I expect they will pay it back. No, sir, I don't believe they will pay me for loss of time while on this trip. I have not had any contract to that effect. The cola drinks which we handle at the place where I am now working in Greensboro, North Carolina, are "Coca-Cola," "Chero-Cola" and "Pepsi-Cola." I don't know how long they have been handling "Chero-Cola" there. I dispense that at the fountain when necessary. I have not dispensed "Pepsi-Cola." I have not dispensed "Chero-Cola" at the soda-fountain there, it is sold in bottles [1633] only. All I have sold has had labels on the bottles. I have seen "Coca-Cola" bottles, but never handled them. No, sir, we do not substitute the bottled "Chero-Cola" for "Coca-Cola," we sell "Chero-Cola" when they ask for it and "Coca-Cola" when they ask for it. I think nobody would mistake "Chero-Cola" for "Coca-Cola." No, sir; the general appearance of that "Chero-Cola" with the label on it, does not look to me like a "Coca-Cola" bottle or "Coca-Cola" color. No, sir, I do not think anybody could possibly think if I gave him "Chero-Cola," that it was "Coca-Cola." I handle no other Cola drinks at the fountain. I have never dispensed drinks anywhere except where I am.

(Deposition of Frank Keane Birch.)

Redirect Examination by Mr. HIRSCH.

This container was the second container to my right, as I faced the fountain and the second to the dispenser's left. [1634]

**Deposition of C. C. Ross, for Plaintiff (In Rebuttal).**

C. C. ROSS.

Direct Examination by Mr. HIRSCH.

I live in Atlanta, Georgia, and twenty-five years old, and am employed by the Coca-Cola Company. I am under Mr. H. B. Pierce. I have been under him since January 8th of this year. Yes, sir, I know I .B. Brawley. He was a witness for me at Nashville, Tennessee. The Davis-Fuston people have five stores at Nashville, and we went into five. In each of these stores we made a "spigot test." Accompanied by I. B. Brawley I called at one of the Fuston stores at the corner of Mulberry and 4th Avenue, South and one of us asked to be served with "Coke" and the other asked to be served with "Coca-Cola." The syrup used in making one of the drinks was drawn from the first spigot to the left center of the fountain as we faced the fountain, labeled "Coca-Cola," the syrup used for making the other drink was drawn from a jug which sat in the case behind the soda-fountain. Mr. Brawley asked for "Coca-Cola" on this occasion and I asked for "Coke." The sprup used in making my drink was drawn from the jug. After making my drink Mr. M. A. Lotz took the jug and poured the remainder of the syrup into the container from which he had just drawn

(Deposition of C. C. Ross.)

the syrup to serve Mr. Brawley with, what he had asked for—"Coca-Cola." Later we made another call there. I will have to refresh my memory from my notes. I made these notes directly after I left the store. Yes, sir, we went back and made another call and I asked to be served with "Coca-Cola" and Mr. Brawley asked to be served with a "dope." The syrup used for making both those drinks was drawn from the first spigot to the left center of the fountain as we faced the fountain, labeled "Coca-Cola." That is the same spigot the syrup was [1635] drawn from to make Mr. Brawley's drink on the previous occasion. That is all we done at that store. Then we went to the Davis-Fuston store at 1803 Cedar Street, where one of us asked for "Coke" and the other for "Coca-Cola" and each of us was served with bottled "Coca-Cola." We later made another call there and one asked for "Coca-Cola" and the other for "Dope." Each of us was served with a bottle of "Coca-Cola." That is the place known as the Nashville Drug Company. We then went to another Davis-Fuston Store which is also known as the Nashville Drug Company—there are two of them known as the Nashville Drug Company— This store was at 1134 Jefferson Street. When we made the first call one of us asked for "dope" or "coke" and the other asked for "Coca-Cola" and each of us was served with a bottle of "Coca-Cola." Yes, sir, there were two stores at which we got bottles. We later made another call there and one of us asked for "Coke" or "dope" and



(Deposition of C. C. Ross.)

the other asked for "Coca-Cola" and each of us was served with bottled "Coca-Cola." That is three Davis-Fuston stores we have been into. Now, we went to two others. We went into one at 28th and West End Avenue and one of us asked to be served with "coke" or "dope" and the other asked to be served with "Coca-Cola." The syrup used in making these drinks was drawn from the same container, which was the first container to the left center of the fountain, labeled "Coffee,"—that is it was to my left as I faced the fountain. That is the only visit we made there.

On this visit Mr. Brawley asked for "coke" and I asked for "Coca-Cola." We then went to the last Davis-Fuston store, known as the Hemlock Pharmacy. I asked for "Coca-Cola" [1636] and Mr. Brawley asked for "coke." At this place we were served with a bottle of "Coca-Cola"—at three of the stores we were served bottled "Coca-Cola." On the next call, I asked for "dope" and Mr. Brawley asked for "Coca-Cola" and we were again served with a bottle of "Coca-Cola." We then went to the store known as the Mathews Ha Ha Store in Nashville. The first call there was on the morning of the 9th of February. I was accompanied by Mr. I. B. Brawley and one of us asked for "coke" or "dope." Let me refresh my memory as to which one it was. Mr. Brawley asked for "dope" and I asked for "Coca-Cola." The syrup used in making those drinks was drawn from the same spigot, which was the center container,—this was a five container

(Deposition of C. C. Ross.)

fountain. There was no label in sight. Later we made another call, and I asked for "dope" and Mr. Brawley asked for "Coca-Cola." The syrup used in making these drinks was drawn from the same container as they were before. We did not go there any more. We then went to the place of business of Fried & Hass in Nashville at the Transfer Station. Refreshing my memory from notes, we went there on the morning of February 9th. I went there accompanied by Mr. I. B. Brawley and I asked for "coke" and Mr. Brawley asked for "Coca-Cola." The syrup used in making my drink was drawn from the third container to the left of the first carbonated water stand as we faced the fountain unlabeled. The syrup used in making Mr. Brawley's drink was drawn from the eighth container to the left of the first carbonated water stand, unlabeled. I went back there about four o'clock that afternoon with Mr. I. B. Brawley. I asked to be served with a "dope" and Mr. Brawley asked to be served with a "Coca-Cola." The syrup [1637] used in making both drinks was drawn from the third spigot to the left of the first carbonated water-stand, unlabeled. That was the same spigot that had been used in making my drink on the previous call, at which time I had asked for "dope." On this second visit I asked for "coke" and the first time I asked for "dope." Refreshing my memory from my notes, I find that my last statement is not correct. On the first visit I asked for "coke" and on the second visit I asked for "dope." On both occasions Mr. Brawley asked

(Deposition of C. C. Ross.)

for "Coca-Cola." My order on the first visit and both orders on the second visit were all drawn from the same container. On the third visit I called for "coke" and Mr. Brawley called for "Coca-Cola." Both drinks were taken from the eighth spigot from the left of the first carbonated water stand, unlabeled, as we faced the fountain. That is the same spigot that was used to serve Mr. Brawley on his first visit when he asked for "Coca-Cola." Those were the only three visits we made to Fried & Haas. We then visited the Warner Drug Store at Nashville. I was accompanied by Mr. Brawley. This store is located at the corner of Cedar Street and the Public Square. I went in and asked for "coke" and Mr. Brawley asked for "Coca-Cola." The syrup used in making both drinks was drawn from the fifth container to the left of the first carbonated water stand, as we faced the fountain labeled "Dope." We made a second visit there on the 9th. I asked for "dope" and Mr. Brawley asked for "Coca-Cola." The syrup was drawn from the fifth container to the left of the carbonated water stand as we faced the fountain, labeled "Dope." On the [1638] 10th of February we made two more visits there. On the morning of the 10th we went in and I asked for "Coca-Cola" and Mr. Brawley asked for "dope." The syrup used for making both drinks was drawn from the fifth container to the left of the first carbonated water stand as we faced the fountain, labeled "Dope." That afternoon we made another visit and I asked for "coke" and Mr. Braw-



(Deposition of C. C. Ross.)

ley asked for "Coca-Cola." The syrup to make the drinks was drawn from the fifth spigot to the left of the first carbonated water stand as we faced the fountain labeled, "Dope." I did not go there any more.

I then went to the place of business of Miller Brothers Drug Company at Chattanooga, Tennessee, on February 25th, 1915, accompanied by Mr. B. M. Johnson.

(Defendants object to any testimony as to what occurred at the Miller Pharmacy at Chattanooga, because not proper rebuttal and because no foundation was laid for it. Overruled. Exception.)

I asked for "dope" and Mr. Johnson asked for "Coca-Cola." The syrup for making both drinks was drawn from the first container to the left center of the fountain as we faced the fountain labeled "sarsaparilla." We made two more calls that same day. That afternoon, right after dinner, we made another call and I asked for "Coca-Cola" and Mr. Johnson asked for "coke." That time the syrup used in making my drink was drawn from the second spigot to the left center of the fountain, as we faced the fountain, although I am unable to tell you what label it was. The syrup used in making Mr. Johnson's drink was drawn from the first spigot to the left [1639] center of the fountain, labeled "sarsaparilla." We went two more times that same day. On the third visit I asked for "dope" and Mr. Johnson asked for "Coca-Cola." The syrup used for making both drinks was drawn from the first spigot to the left center of the fountain, as on the first day,

(Deposition of C. C. Ross.)

labeled "sarsaparilla." On the fourth call I asked for "Coca-Cola" and Mr. Johnson asked for "coke." The syrup used in making both drinks was drawn from the first spigot to the left of the first carbonated water-stand as we faced the fountain. That is all the calls we made at Miller's that day. On the 26th Johnson and I again called at Miller Brothers in Chattanooga, and I asked for "dope" and Johnson asked for "Coca-Cola." The syrup used to make my drink was drawn from the first spigot to the left center of the fountain, as I faced the fountain, labeled "sarsaparilla." The syrup used for making Mr. Johnson's drink was drawn from the second spigot to the left center of the fountain as we faced the fountain. I did not note how that spigot was labeled. We again visited the place late in the afternoon of the 26th and I asked for "dope" and Mr. Johnson asked for "Coca-Cola." The syrup used for making my drink was drawn from the first spigot to the left center of the fountain as we faced the fountain, labeled "sarsaparilla." The syrup used in making Mr. Johnson's drink was drawn from the second spigot to the left center of the fountain. That was my last visit at that place. In company with Mr. B. M. Johnson, we then visited the Null Drug Company in Chattanooga, on February 25th. I asked for "dope" and Mr. Johnson asked for "Coca-Cola." The syrup used in making Mr. Johnson's drink was drawn from the third spigot to the left center of the [1640] fountain as we faced the fountain, labeled raspberry. The syrup

(Deposition of C. C. Ross.)

used in making my drink—just a minute, let me refer to my notes—was drawn from the first spigot to the left center of the fountain, as we faced the fountain. We visited there a second time the same day. On this second visit I asked for “Coca-Cola” and Mr. Johnson asked for “Coke.” Syrup used in making both of these drinks was drawn from the first spigot to the left center of the fountain as we faced the fountain, labeled “raspberry.” We made another visit there the same day and I asked for “dope” and Mr. Johnson asked for “Coca-Cola.” Again the syrup used in making the drinks was drawn from the same container, which was the first to the left center of the fountain as we faced the fountain, labeled “raspberry.” We again visited the Null Drug Company on the same day, February 25th, and I asked for “Coca-Cola” this time and Johnson asked for “coke.” The syrup used in making both drinks was drawn from the same spigot, which was the first to the left center of the fountain as we faced the fountain, labeled “raspberry.” We made three visits to the Null Drug Company on February 26th. On the first visit I asked for “dope” and Mr. Johnson asked for “Coca-Cola.” The syrup used in making both drinks was drawn from the first spigot to the left center of the fountain as we faced the fountain, labeled “raspberry.” On the second visit I asked for “coke” and Mr. Johnson asked for “Coca-Cola.” The syrup used for making those drinks was drawn from the first container to the left center of the fountain as we faced the



(Deposition of C. C. Ross.)

fountain, labeled "raspberry." On the third visit I asked for "dope" and Mr. Johnson asked for "Coca-Cola." The syrup used in making my drink was drawn from the first [1641] spigot to the left center of the fountain, as we faced the fountain, labeled "raspberry." The syrup used in making Mr. Johnson's drink was drawn from the third container to the left center of the fountain as we faced the fountain, labeled "Coca-Cola." Now, I have been refreshing my memory as to this testimony from my notes. I made those notes myself directly after I left the stores referred to. These are the original notes that I made at the time. Yes, sir; I sent in reports to Mr. Pierce taken from these notes. Of course, without refreshing my memory, I couldn't tell who asked for "Coca-Cola" and who asked for "dope" or "coke."

Cross-examination by Mr. LITTLETON.

I have been a detective in the employ of the Coca-Cola Company since January 8th of this year. Prior to that time I was in the employ of the Southern Railway, as ticket collector on the train,—as their train auditor, which employment I held for about three years. Prior to that I was with the N. K. Fairbanks Company, as "Cotolene" salesman. I don't remember just how long I was with them. Prior to that I was with the Anderson Hardware Company, 23 Peachtree Street, Atlanta, Georgia, but I am unable to tell you what year that was. I stayed with them about a year and nine months, but I cannot tell you what year I was with them. I was em-

(Deposition of C. C. Ross.)

ployed there as salesclerk. Before that I didn't have any job. That was about 1907. I left that job to better myself and went from there with the N. K. Fairbanks Company. I left the N. K. Fairbanks Company because my sales ran low. I was laid off on that account—I don't know whether you would call it fired or not, particularly. [1642] No, I was not loafing on the job. The railroad company was the next job I had. It was something like a year between the time I left the Fairbanks Company and the time I got the railroad job. I loafed until I got the job on the railroad. I left the railroad because,—well, dull times came on the last of May and they laid off a bunch of men, but the reason I left them was because I missed the train at Jacksonville and they “canned” me, the expression “canned,” means discharged. I left the railroad company May 11th, 1914, and got a job with the Coca-Cola Company, January 8th, 1915. I was out of a job between May, 1914, and January, 1915. I happened to get my job with the Coca-Cola Company by having some friends connected with that concern. These friends of mine were also detectives, Sam Friend, and D. E. Bolton. I met Friend in Atlanta, and Bolton and myself had been knowing each other ever since we started to school. During the time I was loafing here in Atlanta, I made a trip down through Georgia and Florida as a witness for Mr. Friend, on a piece of detective work in behalf of the Coca-Cola Company. It was the same character of work that I have been testifying about today. Yes, sir; I was paid for my

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work, but not my railroad expenses. I paid my railroad expenses myself. I couldn't say as to whether or not the salary I got for doing that work was sufficient to pay my railroad expenses. No, I didn't lose any money as a result of it. Yes, sir; I made some money as a result of the trip, but I didn't make any over and above my expenses. You ask if I just about broke even; I didn't lose any money, but by making that trip I have made money since. You ask if on that particular trip, I [1643] came out winner or loser, or if I broke even; well, in the long run I come out winner. You ask if the amount of money I got for making that trip was enough to leave me anything after paying my expenses; I couldn't say that it was. Yes, sir; it was a little less than my expenses, yes, sir; as a matter of fact I lost money as a result of that trip. No, sir; it has never been refunded to me, directly. That work I did with Sam Friend was for the Coca-Cola Company. I guess that was along in November, or December, 1914. Sam Friend asked me to go with him and he told me he would pay me two dollars and fifty cents a day and I was to pay my own expenses, which I did. He asked me to go with him because he said there was a lot of little, small towns that he had to make down there, and, in doing his work, he needed a witness, and he knew it would be hard to get one unless he took some one from here. You ask if he thought he would take one along that had a sort of financial interest in being a witness; well, no; not that. But, you say, he wanted a trustworthy



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witness that he could rely on to do the work; that is right, he needed some one he could rely on. He wanted somebody that he could rely on to testify what was necessary—in all cases, I guess he wants that. When we got back a day or two before Christmas, he recommended that Mr. Pierce employ me as a detective, and that lead to my employment. I now get \$85.00 per month, and expenses, as a detective. No, sir, that is not about the best pay I ever had. I believe I got better pay from the railroad, which paid me \$100.00. At the time I made this trip with Sam Friend I didn't know whether I would ever see a job with the Coca-Cola [1644] Company or not. Of course, I wanted to fix myself for it, but at the same time I didn't know whether or not I would get it. However, I had an idea when I went on this trip that if I made good I would get the job. I had faith in it, yes, sir. It was my idea in going on this trip to see if I couldn't make good on a job with the Coca-Cola Company in this line of work. After I reported to Mr. Pierce he didn't put me through any schooling to qualify me for this work, nothing only what I had done with Mr. Friend. Oh, yes; I had instructions as to the kind of work I was to do. I was given very minute details, but the instructions I had was practically the same as what I had been doing, it lead to the same. Mr. Friend showed me how to make out the reports. I went to work immediately after January 8th, 1915, but not particularly on this case. I did not go to work immediately on anything connected with this case. The first time I

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did anything connected with this case was in Nashville on the 15th of February. In the meantime, I made a few towns through Virginia and Ohio. I went by myself. I got hold of this fellow Brawley, in Nashville, by putting an advertisement in the Nashville-“Tennessean” for him. I advertised for a first-class man to do investigation work. I didn’t say anything in the advertisement about “special work.” Really I couldn’t tell how many applicants I had, because I left the hotel when I got one. Brawley was the first one that applied. Yes, sir;—he explained to me that he was out of a job and told me he was on his way to Corinth, Mississippi. He said he thought what I would pay him would help pay his expenses while he was in Nashville. [1645] I paid him three dollars a day. Mr. Kenney, the “Coca-Cola” bottler there in Nashville drove us around to these stores in his automobile. We did not visit any other stores in Nashville besides those I have mentioned. Sometimes Brawley and I had a pre-arranged scheme that I was to ask for one thing and he another, but we didn’t have it every time. No, sir; we did not have a prearranged scheme that he would always ask for “Coca-Cola” and I would always ask for something else. We did not have any arrangement that he would ask for “Coca-Cola” and I would ask for “dope.” One time I asked for one thing, and, another time, another. In other words, one time I asked for “Coca-Cola” and he asked for “coke”; another time he would ask for “dope” and I would ask for “Coca-

(Deposition of C. C. Ross.)

Cola"; another time I would ask for "dope" and he would ask for "Coca-Cola"; we would alternate it around. No, sir; before I went on this trip it was not explained to me what the Coca-Cola Company was trying to prove. I never had been told why I was getting this stuff. I cannot say that I did know why I was getting it. I had instructions to make these "spigot tests," but I didn't know what they were going after. No, I didn't have instructions to hunt out any substitutors in Nashville. I cannot say that I understood that was the purpose of my work. I had instructions to make these "spigot tests," but didn't have instructions as to what I was doing it for. No, sir, they did not explain to me what I was doing this for. They just sent me out and told me to make the "spigot tests" in the stores which I mentioned here. I expect if I had asked why I was doing it, they would probably have said it didn't concern me. I cannot [1646] say that it excited my curiosity in the least bit to find out why I was doing this. I never had been told by Mr. Hirsch or Mr. Pierce that there was a lawsuit pending between these defendants and the Coca-Cola Company. If I have been told that by any one else, I cannot recall the name. It seems to me like some time ago, probably before I went with the Coca-Cola Company, I heard that the Coca-Cola Company was suing the Koke Company. You ask if I didn't know, as a matter of fact, that this evidence I was getting in this case, or that I was getting in Nashville and Chattanooga, was to be used in this suit



(Deposition of C. C. Ross.)

against Koke Companies; well, I didn't know whether it would ever be used or not. Yes, sir; I guess I did know it was gotten for the purpose of being used, if they decided to use it. No, I cannot say that I was curious to know why they wanted to use that kind of evidence or what good it would do them. I cannot say that I ever once thought why I was doing that work. I cannot remember Mr. Kenney discussing the matter with me at all. Mr. Kenney was driving us around part of the time, but half the time he didn't know what we were going into the stores for. I don't know whether or not we knew what we were going into the stores for the other half of the time. You ask if Mr. Kenney was just driving us around there and didn't know what we were there for; well, he no doubt knew I was working in the interest of the Coca-Cola Company. You ask if I don't suppose that he knew when he drove us around to these soda-fountains that we were going there to make these tests; he didn't know what we were drinking there—a heap of times when we would come out, he would say “What did they say”? I said we went to the five Davis-Fuston stores, in three [1647] of which they served us bottled “Coca-Cola.” I went up to the soda-fountain and asked for those. They had a soda-fountain in each of those three places. I believe two or three of them told us they had closed the fountain for the winter. If the fountains were running, we didn't get anything but bottled “Coca-Cola.” I didn't notice them serving anybody else at the fountain. They

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looked like they were closed up. Two of the Davis-Fuston Stores were known as the Nashville Drug Company, and at both of the Nashville Drug Company stores we were served bottled "Coca-Cola." The soda-fountains were not running at either one of these. The other place where the soda-fountain was not running where we got bottled "Coca-Cola" was the Hemlock Pharmacy. (After inspecting notes.) Yes, sir; the other one was the Hemlock Pharmacy. You ask how I know that the bottles which we got at the three drug-stores mentioned were bottled "Coca-Cola"; well, they were labeled "Coca-Cola" and had crowns on them "Coca-Cola," and "Coca-Cola" was blown into the bottles. Yes, sir; I have seen bottles containing other cola drinks. You ask what cola drinks; well, I have seen a great many cola drinks—I have seen several of them, for instance, "Chero-Cola," "My-Cola," "Parafait," "Chas-Cola," "Eps-Cola," "Rivo-Cola." I could study up some more, but that is all I can think of right now. Some of them were put up in a bottle which, from its general appearance is like a "Coca-Cola" bottle. Some of them were labeled, and some were not. The only one I can remember that was labeled was "Chero-Cola." No; that did not look to me anything like "Coca-Cola," that was in block letters. Some of them had the word "COLA" on the crown almost like this [1648] (Indicating a "Coca-Cola" crown)—like the name on the side of the "Coca-Cola" bottle which I hold in my hand, with the trademark "Coca-Cola" blown in the

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glass in that script. You ask if I remember which ones those were; well, there was one that I didn't mention "Tenn-Cola." I think that is made in Knoxville. I had no difficulty in determining just as soon as I saw these bottles that they were "Coca-Cola." They had the label and had the crown and had the words "Coca-Cola" blown into them. You ask if I was able to distinguish right off the real that they were "Coca-Cola" bottles and not some of these others; why, I know that was a "Coca-Cola" bottle in Nashville, the one we are talking about at the Nashville Drug Company. Nobody could have put any of these other drinks off on me as "Coca-Cola," knowing the "Coca-Cola" bottle as I do, but if they had something in "Coca-Cola" bottles they might have. I am familiar with the "Coca-Cola" bottles, and the chances are as a usual thing, most all the time, when you get "Coca-Cola" with "Coca-Cola" blown in it, you are getting "Coca-Cola," but, of course, there could be a chance that they could put "My-Cola" in a "Coca-Cola" bottle. I can tell a "Coca-Cola" bottle right off the reel. I can distinguish the "Coca-Cola" bottle from these other drinks. No, I cannot distinguish "Coca-Cola" from the bottles in which these other drinks. I cannot tell it by the color. But taking the whole bottle, the *toute ensemble*, I can tell a "Coca-Cola" bottle from all these others. I can tell it from the bottle, the label and the crown, and I could do that readily just as soon as I looked at it. You ask if the "Coca-Cola" bottles are uniform; some places they use a



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bottle like that (indicating a [1649] flint bottle) and some places they use a dark bottle, or brown bottle, I am kind of color blind, I don't know as I could tell exactly the color of it, but in Nashville I believe it is a brown bottle. Then there is a kind of blue bottle some of them have in some places, just the least bit blue. The package has always been the same shape. I knew the bottles they gave me in Nashville as "Coca-Cola" because Mr. Kenney said they sold them "Coca-Cola." I don't believe I saw any "Star-Cola" over there. I have heard of "Gersts-Cola," but I don't believe I ever saw any in bottles. If they put out sarsaparilla in "Coca-Cola" bottles I don't expect I could tell it by looking at it. Yes, sir; I have seen other drinks similar in color to "Coca-Cola" in bottles—"My-Cola" and the others I named awhile ago. I cannot say that I have seen any drinks other than cola drinks which are similar in color to "Coca-Cola." At the time I got Johnson to do this work in Chattanooga, I don't think he was doing anything. He was out of employment. I paid him two dollars a day for the work he did. Yes, sir; he got less than the Nashville man. In Chattanooga we made four visits on February 25th to Miller's Drug Store, four to the Null Drug Company and four to C. P. Embrey Drug Company, that made twelve visits we made all together, that we made on the first day. I don't know which store we went to first, but I made a visit to the Miller Drug Company about 10:30. I couldn't say about the time when I made my first visit to any

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of the stores in Chattanooga on February 25th. I do not remember what time of the day we started to work that day. I don't know where I began, I don't know which store I went to first. We made the [1650] rounds and then came back and rested for awhile and then made another round. I followed the same course all the time, going to them in the same order as we had done previous to that time. We went around Chattanooga on the street-cars. On the second day we made three visits to each one of the stores, instead of four, so altogether we made twenty-one visits in the two days we were there. Mr. Johnson accompanied me on all of these trips. I paid him four dollars for his two days' work. I have related all that occurred at Nashville and Chattanooga—all that I did toward getting evidence in this case. I did not ascertain the names of any of the dispensers at any of these places, and Johnson didn't get them in my presence. [1651]

(The following depositions were taken by plaintiff as rebuttal testimony at Atlanta, Georgia, on June 22d, 1915:)

**Deposition of Frank Platt, for Plaintiff (in Rebuttal).**

FRANK PLATT.

Direct Examination by Mr. HIRSCH.

I reside now in Atlanta, Georgia. I formerly resided in Roanoke, Virginia. I am twenty-four years of age. I am connected with the Coca-Cola Company under Mr. Pierce. While I have been with the

(Deposition of Frank Platt.)

Coca-Cola Company I have visited the K. W. N. Pharmacy at Spartanburg, South Carolina, in company with Frank Birch. When we went into the store I asked for "Coca-Cola" and Mr. Birch asked for "dope." The syrup used for making the drinks was drawn from the second container to the left-hand side of the carbonated water spigot as the dispenser faces the customer. The syrup to make both drinks came from the same container. Mr. Birch asked him to give him ten ounces of "Coca-Cola" syrup in a bottle. The boy went back to get the bottle and drew it from the same container that the two drinks were drawn from. The signature on the label referred to as Plaintiff's Rebuttal Exhibit 121 is my signature. I made out that label. That exhibit is the bottle on which I put the label that we got from the dispenser at the K. W. N. Pharmacy. Mr. Birch signed that label also and that is his signature on the label. I saw him sign it. I sealed the bottle on the side of the street in front of the fire-engine house and put the label on at the postoffice. After the label was put on and we sealed it, I put it in my pocket and then delivered it to Mr. Pierce in Atlanta. I did not make any change in the contents of the bottle at [1652] all after the syrup was put in. I sealed it up and put on the label without making any change in the contents of the bottle until I delivered it to Mr. Pierce. Yes, sir, I went to the Vienna Bakery, or Veah's, at Nashville, Tennessee, in company with Tom Murphy, where we made a "spigot test." I will have to refer to my notes to tell you what was



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done. I made these notes from three to five minutes after we came out of the store. In each and every instance I made the notes from three to five minutes after we came out of the store. We went into the Vienna Bakery and Mr. Murphy asked for "dope" and I asked for "Coca-Cola." The boy served us both out of the same container, that is, the syrup to make both drinks was drawn out of the same container. We only made one visit to the Vienna Bakery. Tom Murphy and I then went to the Mathews Ha-Ha-Store in Nashville, Murphy asked for "dope" and I asked for "Coca-Cola." The syrup to make both drinks was served from the same container. I went there once in company with Mr. Murphy and once by myself. When I went by myself I asked for "coke" and was served from the same container that "dope" and "Coca-Cola" was served us on the previous visit, which I made in company with Mr. Murphy. Tom Murphy and I then went to the place of Fried & Haas, Murphy asked for "dope" and I asked for "Coca-Cola," and the two drinks were drawn from the same container. We went back later on and Murphy asked for "coke" and I asked for "Coca-Cola," and both of these drinks were drawn from the same container as the two former drinks had been drawn from. We went back again and Mr. Murphy asked for "dope" and I asked for "Coca-Cola," and both drinks were drawn from the same container [1653] that the former drinks had been drawn from. Murphy and I then went to the Warner Drug Company in Nashville. He asked

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for "dope" and I asked for "Coca-Cola." Both drinks were drawn from the same container. I again went to the same place and called for "coke" and it was drawn from the same container that "dope" and "Coca-Cola" had been drawn from when I called there previously in company with Mr. Murphy. Tom Murphy and I then went to the Nashville Drug Company. He asked for "dope" and I asked for "Coca-Cola." Both drinks were drawn from the same container. Yes, sir; the soda-fountain was running at the Nashville Drug Company. I then went back there by myself and asked for "coke." The syrup to make that drink was drawn from the same container that the two drinks had previously been drawn from. We then went to Miller Brothers in Chattanooga, Tennessee. I asked for "Coca-Cola" on the first trip there and noted the container. I later went back and asked for "dope." The syrup was drawn from the same container. I went in there and called for "coke" and all three of the drinks were drawn from the same container. Murphy and I went to the Davis-Fuston Stores in Nashville. Murphy asked for "dope" and I asked for "Coca-Cola." Both drinks were drawn from the same container. Then I went back by myself and asked for "coke." The syrup used to make that drink was drawn from the same container that the other two drinks were drawn from. We went to three of the Davis-Fuston Drug Stores, and the same thing happened at all three of them. These visits were made with Mr. Murphy in Nashville on the 9th of September, 1914. Plaintiff's

(Deposition of Frank Platt.)

Rebuttal Exhibit No. 73 is a bottle of "Nifty-Cola" which was served to [1654] me at the Terminal Bar at Birmingham, Alabama, in response to my request for "Coca-Cola." At the time I made this purchase I was with Mr. Zeigler. I went with Mr. Zeigler to the Woodworth Bar in Birmingham, and he asked for a bottle of beer and I asked for "Coca-Cola." Plaintiff's Rebuttal Exhibit No. 74 is a bottle of "Cola-Mint" which was served to me. At the Higgins Bar at Birmingham Mr. Zeigler asked for a bottle of beer and I asked for "Coca-Cola." I was served with this bottle of "Dope" filed as Plaintiff's Rebuttal Exhibit No. 72. I was with Mr. Zeigler on the same trip to the Woodworth Bar and he asked for a bottle of beer and I asked for a "Coca-Cola," and I was served with this bottle of "Nifty-Cola," marked Plaintiff's Rebuttal Exhibit No. 75. Mr. Zeigler went with me on another trip when he called for a bottle of beer and I called for "Coca-Cola." I was served with this bottle marked Plaintiff's Rebuttal No. 76. On another occasion Mr. Ziegler was with me and he ordered a bottle of beer and I ordered a "Coca-Cola." I was served with this bottle marked Plaintiff's Rebuttal Exhibit No. 77. On another occasion Mr. Ziegler ordered a bottle of beer and I ordered a bottle of "Coca-Cola." In response to my order I was served with this bottle of "dope" marked Plaintiff's Rebuttal Exhibit No. 70. The same applies to Plaintiff's Rebuttal Exhibit No. 71. Mr. Zeigler ordered a bottle of beer and I ordered a bottle of "Coca-Cola" and I was served with this



(Deposition of Frank Platt.)

bottle marked Plaintiff's Rebuttal Exhibit No. 68. Mr. Zeigler ordered a bottle of beer and I ordered a bottle of "Coca-Cola and I was served with this bottle of "Dope" marked Plaintiff's Rebuttal Exhibit No. 69. I made out the label on all of these exhibits that have been asked about. Mr. Zeigler and I were [1655] together in Birmingham on March 15th, 1915.

Cross-examination by Mr. LITTLETON.

I am twenty-four years old. I have been a detective for the Coca-Cola Company about ten months. Before that I was soda dispenser for the Heinz Cigar Company at Roanoke, Virginia. I was soda dispenser there for about two years. Prior to that I worked as a soda dispenser at various other places. My whole occupation up to the time I became a detective was soda dispenser. I began dispensing soda-water when I was about eleven years old. I quit the Heinz Cigar Store sometime in June, 1914. That was after the Coca-Cola Company had brought suit against the Heinz Cigar Store. When I left the Heinz Cigar Store I come on to Atlanta to get a job. I loafed around here in Atlanta about six weeks and was finally put on the detective force of the Coca-Cola Company. I am getting \$135.00 per month at the Heinz Cigar Store as dispenser. Yes, sir, that was pretty good pay for a dispenser. I quit because Mr. Heinz and myself had a little trouble. No, sir, I was not discharged, I quit. Yes, sir, I testified in the case of the Coca-Cola Company against the Heinz Cigar Company. No, sir; I was not a witness for the

(Deposition of Frank Platt.)

Coca-Cola Company, I was on Heinz's side up there. I gave my testimony in the case of Coca-Cola Company against the Heinz Cigar Store in the spring of 1914, at which time I was still employed by the Hienz Cigar Store. When I first came to Atlanta, after leaving Roanoke, I came up here to see Mr. Hirsch, I had never done any detective work before that. You ask if they put me through any schooling, or told me what they wanted me to do as a detective; well, the only thing [1656] that was told me was that they wanted me to go out and get the truth and nothing but the truth. Yes, sir, that is all they told me—to go out and get the truth, and if I found it naked out in the woods to go out and bring it in. Yes, sir, that is all the instructions I had—to go out and get the truth, to get the naked truth and bring it in wherever I found it. No, sir, they didn't tell me what kind of truth they wanted. They wanted the naked truth, that is all. You say that lots of things are the truth in the world, and you ask if they just told me to go out in the bare world and every time I found anything that was true to bring it in; well, anything that was true in this investigation, what they gave me to investigate. Yes, sir, they just gave me some suggestions to investigate some subject. You ask if they wanted some particular truth, or just wanted truth generally; well, they wanted the truth. You ask what they told me to do besides going out and bringing in the truth; they told me to make a "spigot test" the first thing. I was instructed to do that by Mr. Murphy. The next instructions I got was to

(Deposition of Frank Platt.)

go to Birmingham and make a "spigot test." Yes, sir, they instructed me to get these bottles. No, sir, I did not understand what they were doing this for, getting up this dope for. Well, I had an idea there must be something to it, but I didn't know exactly what it was. I was following instructions. No, sir, I did not know it was to be used as evidence in this lawsuit, not then. I didn't have any idea what it was for at that time. No, sir, it did not excite my curiosity at all to know why they wanted me to go out and get bottles and make "spigot test." I had, however, already testified on behalf of the Heinz Cigar Company in the case of [1657] Coca-Cola Company against that concern. The charge in that case was a charge of substitution. I knew that is what the Coca-Cola Company had set out to do,—to sue people all over the country and charge them with substitution. I knew I was sent out to ferret out cases of substitution. Yes, sir, I knew that was the purpose of these tests I was making. Yes, sir, I did know what the object of my work was then, and I knew that I was sent out to prove that the defendants in this case were substituting on "Coca-Cola." Yes, sir; I was told to go out and bring in that kind of information—that is the instructions given me when I left here—to get this kind of evidence. I was told to go out and get this kind of information so I could testify about it, and bring in things like I have brought in here in the shape of these bottles. I am paid \$85.00 per month by the Coca-Cola Company, and expenses. No, sir, I am not limited as to my



(Deposition of Frank Platt.)

expense account, only my honor. Yes, sir, this is the first time I have testified on behalf of the Coca-Cola Company in any proceedings brought against anybody. You ask if I was asked, in the case of the Coca-Cola Company against the Heinz Cigar Company, if I ever substituted "Lemon-Cola," or "Ko-Nut," for "Coca-Cola"; I don't remember that, whether I was asked that question or not. You ask if that was not what the lawsuit was about up there at Roanoke; about him substituting, I don't know. Yes, sir, I was the head dispenser there. You ask if I was not the chief witness in that case for the defendant; well, he was more of a witness than I was, that is, the defendant himself, but I was on the stand, and it was the purpose of my testimony to establish the fact that the Heinz Cigar Store had not been [1658] substituting.

XQ. 245. "You testified that they hadn't substituted either 'Ko-Nut' or 'Lemon-Cola' for 'Coca-Cola' is that true?"

A. "Well, I don't remember—Yes, sir, I did testify that."

XQ. 246. "And that statement was true, was it, what you testified in that case?"

A. "No, sir."

XQ. 247. You testified falsely in that case, did you?

A. "Yes, sir."

XQ. 248. "Committed deliberate perjury?"

A. (No answer appears to have been made by the witness.)

(Deposition of Frank Platt.)

(Mr. LITTLETON.—I object to the testimony of this witness because he has been rendered infamous by the confession that he is a deliberate perjurer.)  
[1659]

**Deposition of T. M. Murphy, for Plaintiff (in Rebuttal).**

**T. M. MURPHY.**

Direct Examination by Mr. HIRSCH.

I testified in this case before,—last summer. Since that time I have been in school at the University of Georgia. Yes, sir, I have been to Nashville, Tennessee, on behalf of the Coca-Cola Company. I arrived there on the morning of September 8th, 1914. Yes, sir, I went to the place called Mathews Ha-Ha-Shop. I was accompanied by Frank Platt. He called for “Coca-Cola” and I called for “dope.” I noted that the syrup to make both drinks was drawn from the same container. I then went with Frank Platt to the store of Fried & Haas. We made three visits there. On the first visit Platt called for “Coca-Cola” and I called for “dope.” On the second visit Platt called for “Coca-Cola” and I called for “coke,” and on the third visit Platt called for “Coca-Cola” and I called for “dope.” The syrup used to make all these drinks was all drawn from the same container. I then went to the Warner Drug Company in company with Frank Platt. He called for “Coca-Cola” and I called for “dope.” The syrup to make both drinks was drawn from the same container. We then went to the Vienna Baker, Veah’s,

(Deposition of T. M. Murphy.)

where the same thing occurred. Platt called for "Coca-Cola" and I called for "dope," and the syrup to make both drinks was drawn from the same container. The Davis-Fuston people have a number of stores in Nashville, I think, I just went to all of them. In each one I was accompanied by Frank Platt. Frank called for "Coca-Cola" and I called for "dope," and the syrup to make all the drinks was drawn from the same container at the various stores. I am asked to look at my notes and say how many stores we went to. [1660] Well, we went to the Fuston Pharmacy at West End Avenue and 28th Street, the Hemlock Pharmacy at 2113 Church Street, the Nashville Drug Company at 1134 Jefferson Street, the drug-store of W. F. Davis at 1803 Cedar Street, and the Davis-Fuston Drug-store at 901 Fourth Avenue, South.

(There was no cross-examination of this witness.)  
[1661]

**Deposition of F. S. Peace, for Plaintiff (in Rebuttal).**

F. S. PEACE.

Direct Examination by Mr. HIRSCH.

My full name is Frederick Conway Peace. Yes, sir; I testified in this case last summer. In July, 1914, I was in Dallas, Texas, and went to the Palace Pharmacy, which I understand was owned by Pyle, or which is now owned by him, and made a "spigot test." I called for "dope," "Coca-Cola" and "coke" at different times during the day and observed that the syrup to make all three of the drinks



(Deposition of F. S. Peace.)

was drawn from the same spigot in the fountain. Then I interviewed Mr. Nossick, who was manager of the Palace Pharmacy at that time, and inquired what his understanding of the terms, "dope," and "coke," as applied to a soda-fountain beverage, was, and he informed me that "Coca-Cola" was his understanding, and that these terms applied to "Coca-Cola" alone.

(Objected to by defendants because improper rebuttal testimony, no foundation having been laid for same in the cross-examination of defendants' witnesses. Overruled. Exception.)

Then I put on a consumers test from seven until ten p. m., July 2d. F. B. Guy was the dispenser at this place. During the time the test lasted we had fourteen calls for "coke" and five calls for "Coca-Cola." In each instance when "Coke" was called for, Guy inquired of the customer what he wanted, and what he meant by the term "coke," and in each instance the answer was that the consumer wanted "Coca-Cola." Mr. Nossick told me that sometime prior to that the concern had used a substitute for "Coca-Cola," but at that time they were not using anything but "Coca-Cola." I asked him what substitute he had been using and he said they had been using "Koke," manufactured by the Texas Koke Company.

(Objected to by defendants because of hearsay. Overruled. Exception.) [1662]

I remained in Dallas for about a month, and I made the Palace Drug Company my hang-out, so to

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speaking, while there. The whole time I was there I saw drinks made in response to calls for "coke," and "Coca-Cola," all drawn from the same container in the fountain.

I went to Hattiesburg, Mississippi, about April 7th, 1914, and made a "spigot test" at the Corner Drug Store, calling for "Coca-Cola," "dope" and "coke" at different times during the day and observing that the syrup to make all three of the drinks was taken from the same container in the fountain. I also heard other people call for "coke," "dope" and "Coca-Cola," and observed that the syrup to make those drinks was drawn from the same container—only one container was used for all of those drinks. Mr. C. J. Thornton informed me he was the manager of that store. I talked with him on the 14th of April, 1914. I did not get him to sign any agreement. The only thing I tried to get him to do, in the way of a written statement, was, after he had made the statement to me, telling me in a very truthful manner what he had been doing, I asked him to write it down and mail it to me, and he said he would not do that, that he never did write any letters and would not do it. I had secured, or had my witnesses to secure, from his fountain samples, and, after I had those samples, I went in and had an interview with him, and told him who I was, and my mission there to his store—told him I did not believe he was selling "Coca-Cola" in response to calls for "Coca-Cola" at his fountain. At first he denied it, saying, "Yes, I am selling 'Coca-Cola' at my fountain."

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But, when I told him I had gotten samples [1663] from his store, and that I did not believe they were “Coca-Cola,” he then said, “Well, I know there is no use for me to lie about it; I know you have got me, and I think the best think I can do is to be truthful with you.” I said, “Yes, I will appreciate it if you will be, because there is no use for you to deny it.” He says, “I am selling other stuff in place of ‘Coca-Cola,’ ”—and admitted to me that he had been substituting for a year or more, and that he had not sold any “Coca-Cola,” and had not had any “Coca-Cola” in his house, for over a year—and that he had been selling “Koke,” the product of the Southern Koke Company of New Orleans, La., in response to calls for “Coca-Cola.”

(Objected to by defendants, because no foundation was laid for such testimony, and because not proper rebuttal. Overruled. Exception.)

I had my witness to buy two samples at his store in my presence, which samples were introduced in the case brought by the Coca-Cola Company against C. J. Thornton, or the Corner Drug Store.

I made a “spigot test” at the Yellow-Pine Pharmacy, at Hattiesburg, Mississippi. I called for “dope,” “coke,” and “Coca-Cola,” at different times during the day, and observed that the syrup to make all these drinks was drawn from the same container, no distinction being made between the drinks. Later I interviewed Mr. J. E. Jones, who said he was the manager of the place, and I inquired of him what his understanding was of the terms



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“dope,” and “coke,” as applied to soft drinks, and he informed me that it was “Coca-Cola.”

(Objected to by defendants, because no foundation was laid for such testimony, and because not proper rebuttal. Overruled. [1664] Exception.)

That was all I did at the Yellow Pine Pharmacy. I did not see any advertising of a product by the name of “Koke” around the Yellow Pine Drug Store or in Hattiesburg, Miss.

I was in Ocala, Fla., the 16th day of March, until about April 1st, 1914, and, while there, visited the place of H. C. Groves, of the Anti-Monopoly Drug Company. I made a spiggot test there. I called for dope, coke and Coca-Cola at different times during the time and observed that the syrup to make all the drinks was drawn from the same container in the fountain. I had a witness to buy syrup from that fountain in my presence calling for Coca-Cola, and he received the syrup and it was sold to him for and as Coca-Cola. That was introduced in the suit brought by the Coca-Cola Company against the Anti-Monopoly Drug Company. I took various people into the store during the time I was there—lots of people—five or six different people in there with me—told them what I wanted them to do and that I wanted them to notice what I called for and asked for, and asked them to call for either dope, coke or Coca-Cola, and I would call for something else. One of us called for it by the nickname and the other by its correct name, to see whether or not the two syrups to make the two drinks was

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gotten from the same container or not, and in each instance it was. Mr. Thomas, in Ocala, Florida, who is a banker, went with me at one time and asked for Coca-Cola, and other people asked for Coca-Cola, and it was drawn out of the same container. Mr. Garrett, who travels for the Jacksonville Biscuit Company, who knew what I was there for, went in with me, and one of us called for dope and the other for Coca-Cola. Mr. Groves served us, himself. Both drinks [1664½] were drawn from the same container. After I got this drink I said, "Mr. Groves, what is this stuff anyway, is it Coca-Cola?" "Why, no that is not Coca-Cola, that is Wise-Ola, I do not sell Coca-Cola at my fountain." I said, "You have been selling it to me for a week or more." "Oh," he says, "nearly everybody knows I do not sell Coca-Cola." I said, "Well, I do not know it." He says, "Well, I do not sell Coca-Cola, what is the use of my paying \$1.75 a gallon for Coca-Cola, when I can buy this stuff for ninety cents?" "Well," I says, "I do not know what the difference is." He says, "Just that much difference, I am in business to make money." That ended that conversation. Later I went into Mr. Groves' store and asked him if he ever contemplated selling a half interest in his business and he said yes, that he might sell to some young man. He said, "I would like to have some young blood in the store." I got in conversation with him about buying a half interest in the store, and told him I did not know anything about the business, much. He took me around his store, and

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showed me how he made money in the drug business. He told me there was a great many would lose a great deal of money in the drug business, but that he could make a good deal of money in it, for he knew how to play the game. Showing me over the store he showed me a lot of medicines that he had made enormous profits on—showed me some cologne which he said he made himself, that he made enormous profits on. Finally we got in the back of the store and I saw a right new barrel of syrup on the floor that had apparently just been rolled in. It looked like a Coca-Cola barrel, but it was without any [1665] label, and I knew in my own mind it was not Coca-Cola. I asked Mr. Groves what the stuff was, and he says, “Why, that is Coca-Cola, or rather it is Koke. Now, that is another place I make money,” he says, “I do not use Coca-Cola, I buy this Koke and sell it for Coca-Cola, and the customers do not know the difference.” I asked what he paid for it, and he says, “I paid a dollar a gallon for it. It is \$1.25 a gallon, but by discounting the bill in thirty days, I get it for a dollar.” I wanted to see some communication from the Koke Company in regard to that and I said, “you did not get that stuff for a dollar, did you?” He says, “Yes, that is all I paid for it.” I said, “There must be some mistake, stuff that is as nearly like Coca-Cola as that, and you buy it for a dollar, when you said the other day Coca-Cola cost a \$1.75.” He said, “That is right, I got it for a dollar a gallon.” I asked him to show his bill and he went over to his desk and got



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a bill from the Southern Koke Company. It was for that barrel of Koke that he had in the house at that time, and he showed it to me—it was a dollar and a quarter a gallon, and on that bill it said if the bill was paid in thirty days, there would be a discount of 25 cents on the gallon, making the syrup cost him a dollar a gallon. He also told me he got a share of stock with the first barrel of Koke that he bought from them. I asked him to show me the certificate for that stock. He showed it to me, and I observed it was for an amount of \$12.50 of stock, the number of the certificate was 1130. He told me that he sold that in response to calls for Coca-Cola, and the trade did not know the difference; that he had been doing that [1666] for two years—he had not been selling Koke for two years, however,—he had been selling various imitations of Coca-Cola.

I was in Spartanburg, South Carolina, on Jan. 12th, and 13th, 1915, and while there called on the K. W. N. Pharmacy and made a spigot test on the 12th day of January. I called for dope, coke and Coca-Cola at different times, during the day, and observed that the syrup to make the drinks was all drawn from the same container. I repeated the test with the same result on the following day. I then made an attempt to interview Mr. Lever, who was manager of the store, but as quick as he found out my business, he walked off and left me. After I had a short conversation with him in which I told him I represented the Coca-Cola Company, and that the Coca-Cola Company had evidence in hand that he

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was substituting some other drink—I mentioned the name “Ko-Nut,” in the place of Coca-Cola, Mr. Lever says, “I am not doing that, the Coca-Cola Company is mistaken.” I says, “Mr. Lever, we have got the evidence in hand that you are doing it, and that you are selling all the drinks in response to calls for dope, cope and Coca-Cola from the same container here in your fountain.” He says, “That is not true. I keep them in separate containers, and when people call for dope and coke, I give them Ko-Nut, and when they call for Coca-Cola, I give them Coca-Cola.” I said, “We want you to quit that, we want you to serve Coca-Cola in response to calls for Coca-Cola, and also by its nicknames.” He said, “Well, I won’t do that, what do you want, anyway?” I said, “I have an agreement here [1667] I want you to read and sign. If you do that it will settle the matter; if you do not, we will sue you, because we have got the evidence.” He read the agreement, handed it back to me, turned around and walked off and says, “Go on, and sue all you please, I will never sign that agreement.” That ended the conversation and I went out of the store. When I first went in there I told him I wanted to talk with him on some private business and asked him if he wanted to talk there or wanted to go back to a private place. He said, “No, right here will do me.” I did not go around town circulating the report that we were going to sue the K. W. N. Pharmacy. I had talks with five or six of the merchants. I had agreements

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to get from them, and I got agreements from all but Lever. I told them that I had a case against Lever, and that Lever would not sign the agreement, and I was very sorry that he would not do it because it meant trouble for him and I. The reason I did that was because number of merchants asked me what about the K. W. N.—they all apparently knew the K. W. N. was using other stuff, but I did not tell any one I was going to sue or advise the company to sue Lever.

I was in Jacksonville, Fla., in November, 1914, and while there I went to the Terminal Pharmacy and made a spigot test. I called for dope, coke, and Coca-Cola at different times during the day and observed that the syrup to make all three of the drinks was drawn from the same container in the fountain. That is all I did there.

On May 8th, 1914, I went to the Hyde Drug Co. [1668] of Ellisville, Miss. On this trip I was simply interviewing the dealers to get an expression from them as to their understanding of the meaning of the terms dope and coke, as applied to a soda-fountain beverage. I made a spigot test, however, before I met Mr. Hyde. I called for dope, coke and Coca-Cola at different times, and each time the drink served me was drawn from the same container. I then introduced myself to Mr. Hyde, the man who had served me with these three drinks, and told him what I was there for, and asked what his understanding was of the term dope and coke and Coca-Cola.



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“Why,” he says, “They mean Coca-Cola. Dope and Coke means Coca-Cola, absolutely.” And he was mighty honest, I thought I had a friend there. So I really wanted some Coca-Cola syrup, I wanted some real Coca-Cola syrup, and I thought Mr. Hyde had it, and that surely I would get it. I thought the drink he had served me was Coca-Cola. I asked him to sell me three or four or five ounces of Coca-Cola syrup, and he said he would be glad to. He went back in the store and got a bottle. Now, the drinks which he had served me that I spoke of a moment ago, all came from the first spigot to the left from the center of the fountain, the spigot being labeled lemon, when he came back to get the syrup to sell me, he started to go to another spigot, which was the first spigot to the right from the center of the fountain, marked Coca-Cola. He did not look right to me, he looked suspicious to me, and he went up and put his hand on the other container, and of course having the experience I had, I knew what he was fixing to do. I knew right away that he had two systems in his fountain; and when he put his hand on [1669] the container to serve me the syrup from a different container I called his hand. I said, “Mr. Hyde, here is where you got our drinks from,” and I touched the lemon spigot.

(Defendants object to all this gossip as to what occurred with Mr. Hyde, because no foundation was laid for such testimony, and because improper rebuttal evidence. Overruled. Exception.)

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He said "All right," and he sold me syrup from there. And that syrup I sent into the office, and I understand it was analyzed and it was not Coca-Cola.

(Defendants object to the witness' understanding, because incompetent and hearsay. Overruled. Exception.)

The reason I understood that is, because I went there again on November 6th, and got an agreement from Mr. Hyde to get him to quit using that other stuff. I sealed the syrup, put a label on it, put it in the postoffice and sent it to Mr. Pierce. I put my name on the label. I did not make any change in the syrup from the time Mr. Hyde put it in the bottle. Then on November 6th, 1914, I went back to interview Mr. Hyde in regard to that sample of syrup I had gotten from him, telling him that it was not Coca-Cola syrup, and to try to get him to quit using the other stuff, and to use Coca-Cola altogether when dope, coke and Coca-Cola were called for. I introduced myself to Mr. Hyde, told him my mission, and he says, "You talk to Mr. Kelly. I do not want to talk to you at all." I asked if he was not the manager of the store, and he said, yes, but that he did not want to talk to me. I asked if he was using anything else there besides Coca-Cola, and he said he would not say whether he was or not, and that he would not talk to me. I asked if he could not tell me whether or not he was using anything else besides Coca-Cola, [1670] but he said he would not tell me anything, and told me to see Mr. Kelly. So I saw

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Mr. Kelly and he informed me that he was a stockholder in the company and also an attorney, and that they were using two different syrups there. He said, "We are using a syrup that we sell when dope and coke is called for; we try not to get the two mixed up, we try to give the people exactly what they call for—when they call for dope we give them dope, and when they call for Coca-Cola, we give them Coca-Cola." I argued with Mr. Kelley a little while on friendly terms, and tried to get him to agree not to do it, and told him we would bring suit against the store if he did not do it,—if he did not quit selling the stuff that he had there consciously or unconsciously, knowingly or unknowingly, he made mistakes at his fountain, and that other stuff had been sold when Coca-Cola was called for. "Well," he says, "If it has been done it was a mistake, but it was a legitimate mistake, and very often the chances are that we overbalance that mistake by selling real Coca-Cola when dope and coke are called for." I told him that would not suit us, that he would either have to sign the agreement not to substitute any more, or we would bring suit against him. He would not sign the agreement and told me to go ahead and bring suit, and that ended my experience with him. Plaintiff's Exhibit No. 124 is the sample I referred to in testifying in regard to the Hyde Drug Company. Mr. Boswell made out the label on that exhibit in my presence, and I witnessed it and signed it and shipped it to Atlanta by the Southern Express Company from



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Laurel, Mississippi, without changing the contents of it in any way. I sealed it and shipped it to Atlanta [1671] by express.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibit No. 124.)

Cross-examination by Mr. LITTLETON.

T. L. Boswell was the witness I referred to who purchased this sample marked Plaintiff's Rebuttal Exhibit No. 124. I do not know whether he was a detective or not. He was not when he was with me. He was a Coca-Cola representative. No, sir; I am not a detective. Yes, sir; I am one of Mr. Pierce's crew, and was formerly a Pinkerton detective. No, sir; I am not now engaged in detective work for the Coca-Cola Company. I did not so swear in my former examination. I formerly testified in this case in Dallas in behalf of the plaintiff, when the plaintiff was taking its direct testimony. The difference in my mind between a detective and an investigator is that a detective is a man, in my opinion, who looks after criminal work, and things of that character; my work is simply investigating soda-fountains. Yes, sir; I have heard of a detective doing civil work, as distinguished from criminal, and there are civil detectives, too. A detective is a man, I think, who is employed by the city or state, or the United States, or some corporation-detective agency; that man as long as he is working for them can be called a detective; but I am not working for a detective agency or company. I think it depends on who employs a man

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as to whether or not he is a detective. A man loses his identity as a detective as soon as he is employed by the Coca-Cola Company. I think there is a difference between a policeman and a detective. I think they both do work along the same line, but you do not call a policeman a detective. No, I do not [1672] consider a detective's work of the same class as a policeman's; it is along the same line, but one is of a secret nature, I presume, and one is not. Yes, a detective is one who seeks to ferret out facts. He is one who goes out and at times sails under false colors for the purpose of deceiving the person from whom he seeks to get information; he uses a pretext, as a rule, a detective does. 'Oh, yes, sir, I have used pretexts on various occasions, and to that extent you might say I have been a detective, myself, that is one way to term it, yes, sir. I have testified for the Coca-Cola Company in different suits it has had about four or five times. You ask if I have not gotten to be a sort of expert in this testifying business; I do not know what you call an expert, I would not know what to term an expert about testifying. My pay has been slightly increased since I have been with the Coca-Cola Company. It was increased after I testified in this case, and after I had testified several times for the Coca-Cola Company. I had testified three times for the Coca-Cola Company, after which I got my raise in salary. I got the syrup contained in Plaintiff's Rebuttal Exhibit No. 124 from the first spigot to my left from the center of the fountain,

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labeled lemon. That is the same spigot I had gotten all of my drinks from before. The syrup was placed originally in the same bottle you have in your hand, which was furnished me by Mr. Hyde himself. The seal is now broken on that bottle, it looks like the chemist opened it. I do not know whether it was opened by the chemist or not; but somebody opened it. I do not see these bottles after I get them and ship them into the office of Candler, [1673] Thompson & Hirsch, until I come to testify in a case, and of course I do not know who opens them, or who puts numbers on them. I presume it is the chemist's number, but I do not know that. This witness Boswell, who signed this exhibit as a witness, is one of these detectives, operatives, or investigators, whichever you wish to call them, that is on the force headed by Mr. Pierce. He was operating with me in only one or two towns through Mississippi. He was only with me about a week. No, sir, I cannot testify that the contents of that bottle now is the same contents that I put in there originally. I do not remember what kind of package I put the syrup in when I shipped it to Mr. Pierce. I usually get a little box from a drug-store and pack it in there, but I do not know what kind of box I used in this case. I always sealed the box with the same kind of seal that is on that bottle, that is the kind of seal I was using. I put no impression at all on the top, just ordinary red sealing wax there. I went to the Yellow Pine Pharmacy on April 14th, that was after Mr. Pierce had been there one time, because Mr. Jones told me



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Mr. Pierce had been there. That was after Mr. Pierce had gotten Mr. Jones to sign that contract not to sell anything in the future but Coca-Cola. Mr. Jones told me he had signed that, and that is the reason I remember it. I did not approach any of these stores and ask them to sign a contract, because at that time we did not have those contracts. They did not come into use until October, 1914, and I was in Hattiesburg, Mississippi, in April, 1914. They were not using them at that time. I did not get him to sign any kind of contract, nor did I try to get him to sign [1674] any. No, I did not leave the heavy-weight work to Pierce or to anybody else. The kind of contract I tried to get the K. W. N. Pharmacy to sign was one like the Plaintiff's Rebuttal Exhibit No. 110. I tried to get the K. W. N. Pharmacy to sign that. I got five other druggists in Spartanburg, S. C., to sign contracts similar to that. I do not remember what products they were handling, but some were handling Koke, made by the Southern Koke Co., and some were handling Ko-Nut. Mr. Oakman of the Oakman Pharmacy informed me that he handled a little of both. I understood that the purpose of this contract was to get dealers to handle in the future nothing but Coca-Cola in response to calls for dope, coke, and Coca-Cola. You ask if as a matter of fact I was not endeavoring to get dealers to quit handling these drinks similar to Coca-Cola; no, in a good many instances the dealer would ask those things, "Does this cut out everything else ex-

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cept Coca-Cola?" I would say, "Why, no, you can handle anything else you want to, but do not sell it when dope and coke is called for; only sell Coca-Cola when dope and coke is called for, that is what this agreement means. You can handle Pepsi-Cola, Ko-Nut, Afri-Cola, if you will sell them when they are called for by their proper names, but dope and coke means Coca-Cola, and we want you to sell Coca-Cola in response to calls for dope and coke." That is what I told the dealers. I told them that because I had been instructed to tell them so, by the Coca-Cola Company. You ask if the Coca-Cola Company had any objection to drinks being sold similar in color to Coca-Cola at soda-fountains; well, after the evidence has been gotten on a man—we were due something—we were due some consideration. It was in our [1675] power to bring suit against that man—and I so informed the dealer—but we did not want to bring suit against anybody,—it is not the desire of the Coca-Cola Company to bring suit against a man, and if he will promise and give us this, that he will not sell the other stuff—not have it in his fountain, whereby a mistake can be made accidentally, we will say, and put the other stuff out of his way—get the danger away from him—then we won't sue him, but if he won't do that, then we will. In order to relieve the danger of any possible chance of substituting, or have no possible chance of confusion, it is the policy of the Coca-Cola Company, which I am thoroughly acquainted with, to endeavor to get

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dealers to quit handling any drink that could be substituted for Coca-Cola,—in other words, any drink that is similar to Coca-Cola in color and taste. That does not apply to root beer, because although root beer is the same in color, practically speaking, it has not the same taste. No, I did not testify in this case before that root beer had a different color from Coca-Cola. You ask if I made no such statement on my examination before; well there is a difference, of course, a slight difference. You ask if I did not testify before that it was such a difference that I could tell the difference between a glass of Coca-Cola and a glass of root beer; I can, but the ordinary customer cannot. No, sir, I cannot read the ordinary customer's mind, I do not know what he can do. Coca-Cola is a rich red bright color, and root beer is a dark muddy color. I am speaking now of Hires Root Beer. No, sir, there is not a decided, appreciable difference between them in color, but [1676] there is a slight difference. I think I would be able to tell the difference between a glass of root beer and a glass of Coca-Cola, if I saw them, as far apart as this desk here. No, sir, I cannot tell the difference between Coca-Cola and other drinks on the market. I know of probably ten other drinks on the market that are similar to Coca-Cola. That is all I have ever heard of. I am positive of that, and as positive of that as I am of anything else I have testified to in this case. I have seen "Ko-Nut," "Rye-Ola," "Wise-Ola," "Alo-Cola," "Lemon-Cola,"



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“Chero-Cola,” “Celery-Cola,” “My-Kola,” “Moxie,” “Sarsaparilla,” and this dark colored cream soda—they call it “Cream Soda.” These drinks are all similar in color to Coca-Cola. I have also heard of “Star-Cola,” “Luck-Ola,” “Glee-Nol,” and “Tru-Cola,” but I have never seen those drinks. I have heard of Dope, also. You ask if that is similar in color to Coca-Cola; well, that is Coca-Cola. I never in my life saw a product labeled “Dope.” I never in my life saw a product labeled “Koke.” Now, these drinks I have mentioned a moment ago are decidedly more than ten or twelve drinks. Now, since we have been over them, I know of about twenty that are similar in color to Coca-Cola. The fact is, there are three or four drinks similar in color to Coca-Cola dispensed at soda-fountains in most every town I have been to, I presume, but I do not drink all those drinks, the only one I drink is Coca-Cola. You ask if I, as the representative of the Coca-Cola Company, am endeavoring to get dealers to quit handling all drinks which not only look like Coca-Cola, but which taste like Coca-Cola, other than Coca-Cola; we are trying to get them—in cases where we catch them substituting, we try to get them to do away with every [1677] drink that could be mistaken for Coca-Cola; the two, of course, have to go together. If the drink looks like Coca-Cola,—for instance, Sarsaparilla, that looks like Coca-Cola, but we do not object to that because that could not be mistaken for Coca-Cola.

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You ask if our idea is to drive out of the soda-fountains every drink that could be mistaken for Coca-Cola; we try to keep the dealer from handling—after we catch him substituting, after we know he is a man who will substitute, whom we cannot trust, then we take the danger away from him, as I stated awhile ago. And we consider every man a substituter who handles any drink similar to Coca-Cola in color and taste and who sells it when dope or coke is called for. No, sir, we do not consider every man who handles these other drinks a substituter, not if he does not sell them when dope and coke are called for. If he sells Afri-Cola and My-Cola, on its own merits, when they are called for, he is not substituting. But I have never found a man to do that. I have never known of a man doing it. No, I do not consider all these men who handle all these other drinks other than Coca-Cola as substituters, because I do not know all of them. But, I have formed an idea from the experience I have had, and the idea I have in my mind is, that if a man has got the stuff in his house—if he has got it in there at all—he can only have it in there, in my mind with the idea of substituting. No, I did not acquire that idea from the Coca-Cola Company; I acquired it from personal observation and experience. Whenever I go out with this idea in my head my idea is to eradicate these drinks from the soda-fountains where I visit and make them handle Coca-Cola in the future, [1678] exclusively, if they are substituters. I do not visit substituters

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only; I visit the trade generally and check up soda-fountains, and see whether or not they are substituting—to get samples from them. No, I do not just go to soda-fountains at random and check them up, to see what they are doing—a good many soda-fountains are not suspicious. You ask how I determine when one is suspicious; I do not determine that, Mr. Pierce tells me. I am sent to certain designated ones, but I do not go only to those places where I am sent; I go to other places on my own hook and make other determinations besides those I am instructed to. I keep the trade under constant surveillance, and whenever I find a man handling one of these Cola drinks in addition to Coca-Cola, I immediately put him through a test to find out what he is doing. Pretty soon I come along with a contract and present it to him to agree not to handle the substitute, but I do not do that unless we catch him substituting—not unless we get samples from his fountain—those samples are analyzed and if they turn out to be Coca-Cola, then there is no visit to that man; if they turn out to be not Coca-Cola, then we endeavor to get that man to sign a contract, or sue him—some of them we do not go to with a contract, we just sue them. Yes, sir; I have known of a case where the sample turned out to be Coca-Cola; such cases are so numerous it would be difficult for me to call them right off. A great many places I get syrup from it turned out to be Coca-Cola. I do not know that of my own knowledge. That is just what



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the chemist reports on them. So far as I am concerned, it is purely hearsay. But the general policy of the [1679] Company, as I understand it, and the general policy I have pursued in this respect, is to enforce this provision of the contract—to see that dealers from whom we get these contracts, or from whom we try to get them, will enter into a contract and agree to abstain from handling, selling or dispensing in any way or manner a product of the same or similar color to Coca-Cola, or that can be used as a substitute for, or substituted for Coca-Cola—that is virtually right. When I go out and call on the trade I speak of these other cola drinks as substitutes and talk about them as substitutes and as imitations of Coca-Cola, and I refer to Koke and Dope that way—the products of the Koke Company of America, and others—they are down and out substitutes, they are. And I have told dealers that and dispensers, and spread the information broadcast, that the Koke Company was a fraudulent concern and engaged in a fraudulent business, and I have endeavored by such means as those persuasions to get dealers to cut out handling Koke and Dope, because in nearly every instance a dealer will admit to me Koke and Dope are Coca-Cola, and he was only selling the other product because it was cheaper, and I have succeeded in a great many instances. I have gotten about sixty or seventy contracts signed like those referred to. I have not been the only one engaged in this business of getting contracts. Mr.

(Deposition of F. S. Peace.)

Boulton has been doing the same thing. We began getting these contracts the 22d day of last October. That is the first time I ever saw one of them. No, sir. I did not ever get any other contracts before that. The dealers understood—those who signed these contracts, understood from them that they were to cut out handling these other drinks and to handle Coca-Cola in the future exclusively, because I told them that when they violated that contract we would use the [1680] contract against them, and thereafter they purchased Coca-Cola with that understanding and agreement. In pretty near every case they have stuck by their agreement—I do not know of any one who has violated it. After signing those contracts they purchased Coca-Cola pursuant to that contract and with that understanding. All of these contracts I said I procured were not procured from Koke customers, some were from people who handled “Ko-Nut” and “Afri-Cola.” I imagine about a third or a fourth of them were Koke customers, that would be about twenty or thirty. All of these contracts have been procured since October 22d, 1914, they were similar to Plaintiff’s Rebuttal Exhibit No. 110, that is the only contract I ever had.

Yes, sir; I did tell Mr. Lever at Spartanburg, S. C. that his company would be sued, or that he would be sued if he did not cut out handling these other products which he was handling, similar to Coca-Cola. I do not know whether I told all five of the other dealers in Spartanburg that Leever had not signed

(Deposition of F. S. Peace.)

the contract, but I told at least one of them. I did not tell them I was going to sue Lever because he did not sign the contract, but I told one man that he was not going to sign the contract, and that one man apparently told everybody else in town about it. There was one man at Spartanburg, Dr. Green—I do not know whether it is Green's Drug Store, or the Spartanburg Drug Company, convinced me that he was not a substitutor, and that he had never had any of this other stuff in his house, except about five years prior to that time. He told me that he got a five gallon keg of Afri-Cola extract, and he took me downstairs and showed [1681] me that he still had it in the house, an old barrel with a lot of dust on it. I did not insist on him signing the contract, although he told me he would do it if I insisted, rather than to go to court, but he did not want to sign it and I did not want him to sign it because I believed him. I did not want a man to sign a contract of that kind when I, in my own heart believed he was innocent. He explained to me that his dispenser might have got Coca-Cola syrup mixed up with some other kind of syrup in the fountain, that was absolutely foreign to any similar product, because he only handled the Coca-Cola in the fountain, and he talked in a way that I believed him. You ask which one of the other five druggists I have mentioned in Spartanburg it was that I had an unpleasant conversation with, or a word spat with; very often I have a few little harsh words with nearly all of them, but as a rule they nearly always



(Deposition of F. S. Peace.)

admit to it and acknowledge their guilt, and thank me for the way in which I talked to them, and handled the case with them. They nearly always thank me for my benevolence in giving them the opportunity to sign this contract. I never told any of them that I would just give them five minutes in which to sign the agreement, because each one of them went to their attorneys and consulted their attorneys before signing it—I do not say each one of them, there were about three of them, Oakman consulted his attorney a long time and his attorney advised him to sign it. I went with him to see his attorney and argued the case to his attorney. These dealers understood by going to the attorney that if they did not sign the contract, there would be a law-suit. Defendants' rebuttal [1682] exhibit No. 8, is a little card that we used. I mean by "we" the Coca-Cola Company. We got this out and gave them to people in order to get them to quit using the nicknames for Coca-Cola. The card speaks for itself very plainly. It tells on there that if you use a nickname you encourage substitution. Defendants' Rebuttal Exhibit No. 9, is a Coca-Cola advertisement gotten out by the Coca-Cola Company. I have seen thousands of them along the same line. I have been with the Coca-Cola Company since March, 1914, but I have worked for them since 1911. The Coca-Cola Company has been advertising this way about the nicknames to the best of my recollection for about two years. I stayed around Ocala, Fla., when I went down there to investigate the Anti-Monopoly Drug Store from the,

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16th of March to the 1st of April, 1914. I was in the Anti-Monopoly Drug Store every day. A young man named Claude Hickie was soda-dispenser there and he waited on me at times. They used two containers, the first two to my left from the center of the fountain, in serving drinks in response to requests for dope, coke and Coca-Cola. Some days they would use one container practically all day, and may be the next day they would use the other one. I never saw them use both at the same time. I do not know whether they both had syrup in them at the same time or not. Yes, sir; I have gone around investigating the barrels at different soda-fountains to see what dealers were handling. You ask how many different kinds of cola drinks I have discovered in barrels at the different soda-fountains, I have been to; Why, "Ko-Nut," and "My-Coca," are the two principal ones, "X-O"—that is another substitute for Coca-Cola. I understand it is made in [1683] Baltimore, or some place in Virginia. They are the only ones I have seen in barrels. I am very familiar with the "Ko-Nut" barrels, and "Koke" barrels. I am familiar with the barrels that the Southern Koke Company puts their product out in. I notice all the barrels particularly but these are the most prominent ones. I have seen barrels in which "My-Coca," "Wise-Ola," and "Rye-Ola," is shipped, and I was able to tell the difference between these various barrels and Coca-Cola barrels, because Coca-Cola barrels were always labeled Coca-Cola, great big labels on either end.

(Deposition of F. S. Peace.)

That is the only way I could tell the difference between them, that is the principal way to tell the difference. "Wise-Ola" barrels and the barrels used by the Southern Koke Company are the same color, practically speaking, as the Coca-Cola barrels, and so are the "My-Coca" barrels, but the "My-Coca" barrels bear a great big label, almost as large as the "Coca-Cola" labels. All I ever saw of them were labeled "My-Coca"; and these barrels used by the Southern Koke Company of New Orleans, do not have any label on their barrel. They are painted red like Coca-Cola barrels, but do not have any label, except a little shipping tag—a small tag—not a tag but a label with the name of the concern that the stuff is shipped to. There is nothing on the barrel or shipping-tag that indicates who it is from, or what is in the barrel. I have never seen any stenciling on the end of the barrel. I guess I have seen about a hundred of them. Out of that hundred I swear positively that I have never seen one that had anything on the barrel at all to show where it came from, or what was in it. All that was on the barrel was a label with the name of the concern, that the barrel was shipped [1684] to, just a blank label with the consignees name on it. And I have seen some labels of the Koke Company that would have a description on there as to how to tap the barrel. But, none of them, however, have on them "Southern Koke Co., Ltd., of New Orleans," or anything like that. The labels were not cardboard, they were paper. I never saw any stenciling



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on the barrel of any kind. There was nothing on the barrel to indicate how much was in it, or if there was I did not notice it. I can usually tell what sized barrel it is by looking at it. I have examined carefully to see just what writings or stencilings or labels or anything else was on the barrels, and all that was on any of the barrels that I ever saw was this paper label with the address of the consignee, and there was not another thing on the barrel. I have seen Koke barrels when I was down in New Orleans, that was in 1914. I was in New Orleans practically all of the month of May, 1914, and I saw quite a good many Koke barrels. Then I saw some around the Koke plant at 807 Howard Ave., New Orleans, but I did not see any labels that said anything about Koke on them, there. I did not go inside, I just stood on the outside and looked in and saw quite a few barrels there, probably forty or fifty. I saw no labels on them, whatever.—Yes, on the barrels that they had gotten back and that had been sold with syrup in them to people. The only place I saw barrels in New Orleans was at the Koke plant. I saw one over at Bay St. Louis, Miss., not far from New Orleans, in a drug-store, and the man told me it was Dope, bought from the Southern Koke Company of New Orleans. Yes, sir; I have seen Koke barrels in railroad stations. You ask if I recognized [1685] them right off as Koke barrels; I could not tell whether they were Koke barrels, or whether they were some other kind of syrup barrel. I recognized them as syrup barrels. They

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looked like the standard syrup barrels used for syrups. I saw a good many of them in Dallas and Fort Worth, Texas. People told me they contained Koke, manufactured by the Koke Company of Texas, but I do not know whether they did or not. I do not know how many different kinds of cola syrups the Anti-Monopoly Drug Co., handled except from what Mr. Groves told me. He said he was using a barrel of Wise-Ola at the time Garrett and I got some drinks there, and later I went in and saw a barrel which he said contained Koke from the Southern Koke Company, he told me he had a barrel of Ko-Nut on the way, but it had not gotten there. I do not recall seeing any of the Koke bottles when I was in New Orleans. I did not see any kind of Koke bottles in Dallas. You ask if I have seen the bottled Koke or Dope put out by the bottlers; yes, sir; but not in Dallas, I saw them down in Mississippi. Yes, sir; the crown was on them. Yes, sir; I have also seen the bottled goods sold at various places with the name Dope on the crown—it would not be anywhere else on the bottle. It was not blown in the glass, and when the crown was pulled off, and the consumer had got the bottle, he could not tell what was in the bottle, it would not be labeled then. I do not recollect ever having seen any bottled Coca-Cola that did not have the trademark Coca-Cola blown in the glass of the bottle. All Coca-Cola bottles have “Coca-Cola,” blown in the bottle in one or more places, and have the Coca-Cola crown on it. Of course anybody who sees the

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name Coca-Cola on there would take that as a  
[1686] Coca-Cola bottle.

(Defendants here tendered and offered in evidence  
Defendants' Rebuttal Exhibit No. 8 & 9.)

Redirect Examination by Mr. HIRSCH.

I have seen all of the advertisements in the book  
marked Plaintiff's Rebuttal Exhibit No. 125-A, as  
they are displayed on pages one to nineteen inclu-  
sive in said booklet. I recognize them all as Coca-  
Cola advertisements.

(Plaintiff here tendered and offered in evidence  
Plaintiff's Rebuttal Exhibit No. 125-A.)

Recross-examination by Mr. LITTLETON.

Yes, sir; I am familiar with the points the Coca-  
Cola Company is endeavoring to establish in this  
case; I understand what they are trying to establish.  
No, sir; I cannot tell the difference in taste between  
Coca-Cola and these other cola drinks on the mar-  
ket, not all of them, but I can tell the difference be-  
tween Coca-Cola and some of the others. One or  
two taste very much like Coca-Cola, for instance the  
stuff that the Southern Koke Company make at  
New Orleans, that they call Dope and Koke, I can-  
not tell the difference between that and Coca-Cola,  
it is mighty hard. Ko-Nut is another one that is  
hard. I could not tell the difference at all between  
Coca-Cola and Ko-Nut. My-Cola tastes very much  
like Coca-Cola, and I cannot tell the difference al-  
ways there, but sometimes I can. Yes, sir; Coca-  
Cola always tastes the same to me, whether it is at  
soda-fountains or in bottles. Yes, I have had the



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taste of Coca-Cola to vary slightly, but that is due to the water. If you have the water charged too heavy or light, then there is a difference. Yes, it has varied in taste at [1687] different soda-fountains where I have gotten it in a small degree, but the actual taste does not change, just burns and stings if the water is charged too heavy, it burns and stings your tongue; if it is not charged too heavy it won't. Rye-Ola and Wise-Ola, I think, are very much like Coca-Cola, but I think, I can tell the difference in taste between them. Some of these drinks taste so nearly like Coca-Cola that you cannot be positive. In my mind some times I might be positive, but then I could not swear to it. So many of these various cola drinks taste so nearly like Coca-Cola that I cannot tell the difference, and I have to resort to chemical analysis.

**Deposition of W. A. Beaumont, for Plaintiff (In Rebuttal).**

W. A. BEAUMONT.

Direct Examination by Mr. HIRSCH.

I reside at 1423 Peachtree Street, Atlanta, Ga., where with the exception of two years I have lived all my life. I am in the employ of the Bickerstaff-Richards Co. For two years I lived in Jacksonville, Fla.—that is, I traveled out of there for two years for the Bradstreet Company. Yes, sir; I know Sam Friend, and on or about January 5, 1915, I went with him to the Terminal Pharmacy in Jacksonville, Fla. The label on plaintiff's rebuttal Exhibit 122 bears

(Deposition of W. A. Beaumont.)

my signature. Sam Friend made out the label. Sam Friend and I went to the Terminal Pharmacy and walked up to the soda-fountain and I asked for dope and Friend asked for Coca-Cola. The syrup used for making the drinks was drawn from the first container in the center on the left-hand side as you go in the door. Mr. Friend then [1688] asked the dispenser to give him enough Coca-Cola to make six drinks of Coca-Cola, and the syrup was placed in a thermos bottle which Mr. Friend had. This syrup was drawn from the same container as that which was used to make our drinks was drawn from. We took the thermos bottle and went and got this bottle here in a saloon in less than ten minutes, and poured it into it, stoppered it and sealed it. No change at all was made in the syrup from the time we got it in the thermos bottle. Mr. Friend sealed that bottle at the hotel in the presence of myself. I saw him write out the label and he signed it in my presence and I signed it in his presence.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibit No. 122.) We went back to the Terminal Pharmacy the next morning about ten or ten-thirty o'clock and I asked for a dope and Mr. Friend asked for a Coca-Cola, and we were served out of the same container. Mr. Friend then asked for enough syrup to make six glasses of Coca-Cola, and he drew the syrup this time from a different container from that from which the drinks had been drawn. He drew this from the first and third on the other side—on the right-hand side of the car-

(Deposition of W. A. Beaumont.)

bonating arm. We went around and got a bottle and placed the syrup right straight in the other bottle. No change was made in the syrup whatever after we got it from the fountain. Mr. Friend then sealed up the bottle and made out a label in my presence and we both signed it in the presence of each other.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibit 123.)

Cross-examination by Mr. LITTLETON.

I am 24 years of age. We got the first sample [1689] at Jacksonville from the Terminal Pharmacy—that is Plaintiff's Rebuttal Exhibit 122—on either January 5th or 6th, 1915, and we got the second sample the next day, between ten and eleven o'clock. At that time I was not working for the Bradstreet Company. I had quit the Bradstreet Company in June, 1913. I had quit them to get out of the State of Florida on account of my health, on account of the malarial. I was not doing anything at the time I helped Friend get these samples, I was on a honeymoon, I had just married. I have known Sam Friend for ten or fifteen years. I knew he was a detective for the Coca-Cola Company because he told me he was. He told me he was getting samples of syrup for the Coca-Cola Company, but I do not think he mentioned anything about any purpose at all in getting the samples. A little later I asked him what he was doing with those samples, and he said he wanted to see whether they were selling real Coca-Cola or not. He said he wanted to find out whether



(Deposition of W. A. Beaumont.)

or not they were selling real Coca-Cola, so they could find out whether they were substituting, and so he could make them sell real Coca-Cola—bring suit against them and make them sign a contract that they would not sell anything but real Coca-Cola. He paid me two dollars a day for my services, amounting in all to four dollars for the two days' work. I understood at the time that he was paying me this \$2.00 a day for the purpose of qualifying me as a witness in this lawsuit. We went to three or four other places besides the Terminal Pharmacy, and repeated this process at each one of those places. No, I did not make any notes of what we did there. I [1690] just carried it in my head. I always asked for the same thing in each place we went into. I always asked for dope and never asked for coke or Coca-Cola. Mr. Friend and I had agreed in advance what I was to ask for, "dope," and he was to ask for Coca-Cola. We never varied that at all. The first visit to the Terminal Pharmacy was about six o'clock P. M. It was just getting dark. I do not know the name of the dispenser who served us, but I think I heard in Jacksonville it was Sharp, himself,—I do not know him by sight, but I think it was Sharp, because I met him once before when I got a report on the Terminal Pharmacy, about two years before. On the first visit the syrup to make the drinks was drawn from the first left-hand center spigot, that is to say, the first one to the left of the carbonating arm, as we faced the dispenser and the first one to the right of the carbonating arm as the

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dispenser faced us. It was labeled "Coffey." The next morning when we made the second visit, the syrup to make the drinks which we got was drawn from the same spigot. In the first case the syrup was drawn from the same spigot on the second visit it was drawn from the other side, that is from our right and the dispenser's left. He drew half of it out of the first and skipped one and got the rest out of the third spigot, that is to say, the first and third spigots on my right as I faced the fountain. Both of those spigots were labeled Coca-Cola. I presume he jumped from the first to the third spigot because the first was getting a little empty. We went right straight from the Terminal Pharmacy to the other drug-stores we visited there in Jacksonville. The other places we visited was a fountain on the corner [1691] of Adams Street, right by the Flaggler Hotel; another one right back of the Flaggler Hotel, known as the "16th Street Pharmacy," 16th and Main Streets. We went to two others besides those, one of which has gone out of business. There were three, including the Terminal Pharmacy that we inspected. At the Adams Street place the syrup was drawn from the first left-hand center spigot, that would be about the same spigot as they were drawn from at the Terminal Pharmacy. We made two visits to that place. On the second visit the syrup was drawn from the same container. Each time I asked for dope. We made the first visit to the Adams Street place about twenty minutes after we left the Terminal Pharmacy and we got a sample

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from that place. We visited the 16th Street Pharmacy on the same trip. The syrup at that place was drawn from the same spigot, i. e., the first one on the left-hand side, for both drinks. I asked for dope there and Sam Friend asked for Coca-Cola. On the second day at the Adams Street place the syrup was drawn from the same spigot as on the previous occasion, and the same thing occurred exactly on the second visit as occurred on the first visit, the syrup being drawn from the same spigot exactly. We made the second visit to the Adams Street store somewhere around ten-thirty or eleven o'clock in the morning. The same thing occurred on the second day at the 16th Street Pharmacy as had occurred on the first day. We went to the 16th St. store about somewhere around eleven o'clock. On each day we went first to the Terminal Pharmacy, then to the Adams Street store, and then to the 16th Street store, and we went in the same order on the second day. We got samples of syrup on both [1692] days from the Adams Street Pharmacy. In each case it was drawn from the same spigot, and that was the same spigot that the syrup to make the drinks had been drawn from. That was also true of the 16th Street Pharmacy. We told the Terminal Pharmacy that we wanted the syrup to make drinks on the train with, which was not true. After we left the Terminal Pharmacy on the first day, Friend carried the Thermos bottle. He took it with him half way to the Adams Street place and then we got a whiskey bottle in a saloon on Bay Street, and poured



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the syrup into it,—a half-pint whiskey flash. About an hour and a half afterwards we stopped at the hotel and sealed it. After putting it in the bottle at the saloon, Friend then placed it in his grip and carried it around to the Adams Street place. After he got the sample at the Adams Street place he poured that out and put it in another bottle, and put that bottle in the grip. Then he went to the 16th St. Pharmacy but he carried the syrup from there in the Thermos bottle back to the hotel where he poured it into another whiskey bottle—a half pint whiskey flask. When we got back to the hotel I went to his room and we labeled and sealed the bottles there. The bottles were sealed with a brass seal with red sealing wax with S. F. on the seal. I believe we sealed over the top of the bottle so that it could not be opened without breaking the seal. From the looks of Plaintiff's Rebuttal Exhibit No. 122, it is the same contents—same bottle and same label, with the exception that the seal on it has been broken. Yes, it is possible that the contents of that bottle has been removed and other contents put in there since I saw it last. I have no way of telling at all that the contents of this bottle now is the same [1693] contents that it was the last time I saw it. Plaintiff's Rebuttal Exhibit No. 122 is an ordinary half-pint whiskey bottle. We got the same amount of syrup at each place, except on the second visit to the Terminal Pharmacy, when we got a pint—filled the thermos bottle entirely full. The whiskey bottles we got the first day to put the syrup in were half-pint bot-

(Deposition of W. A. Beaumont.)

tles, but on the second day one of them was a pint bottle, the pint bottle was used for the syrup gotten from the Terminal Pharmacy. All the others were half-pint bottles. They were all the same kind of bottle. The seal on Plaintiff's Rebuttal Exhibit 123 has been broken also, and the stopper comes out readily. I cannot, of course, say whether or not the contents of that bottle is the same now as the contents when I last saw it, and I do not know whether or not anything has been substituted for the original contents. After the bottles were all sealed up Friend packed them in a box and told me he was going to put them in the Southern Express Office. The last time I saw them I left them with him. I have gone over this matter again with Sam Friend since I have seen him here, and talked it over to refresh my recollection about it to a small extent. I did not come here in response to any subpoena.

**Deposition of David Emory Bolton, for Plaintiff (In Rebuttal).**

DAVID EMORY BOLTON.

Direct Examination by Mr. HIRSCH.

I testified in this case last summer. I was in Spartanburg, S. C., on June 6, 1914, and went to the K. W. N. [1694] Pharmacy and called for a Coca-Cola. I observed the spigot the syrup was drawn from to make the drink, and the label if any on it. Later I went back there and bought a cigar, on the second trip I stayed in the store for ten or fifteen minutes and heard two customers call for dope.

(Deposition of David Emory Bolton.)

I observed the spigot that the syrup was drawn from to make these drinks, and later went back and called for a dope myself, and observed the spigot from which the syrup was drawn to make it. In the afternoon I went back and called for a coke, observing the spigot from which the syrup was drawn to make it, and later I called for Coca-Cola, making the same observation. The syrup used for making all of these drinks was drawn from the same container. I had an interview with Mr. Lever, the manager of the K. W. N. Pharmacy, and asked him what his opinion or understanding was of the terms dope and coke, as applied to a fountain drink. Mr. Lever said emphatically and frankly that the terms dope and coke meant Coca-Cola, and that he served Coca-Cola when they were called for.

I was in Meridian, Miss. on Feb. 24, 1915, and made a spigot test at the store of R. A. Thorne, the Union Drug Co., I believe. I went to the store in company with Mr. E. V. Massey, he called for dope and in his presence I called for Coca-Cola, at that store, and later we went back and I called for coke and Mr. Massey called for Coca-Cola. On each occasion we observed the spigot the syrup was drawn from to make these drinks, and all four drinks were drawn from the same container. I was in Jackson, Miss. on Feb. 23d, and while there visited the Corner Drug Store, in company with Mr. Roberts. [1695] One of us called for dope and the other for Coca-Cola—I do not remember just now which one called for which, but the syrup to make both drinks was drawn



(Deposition of David Emory Bolton.)

from the same container. We made two other trips there, on one of which one of us called for coke and the other for Coca-Cola, and on the other trip one called for dope and the other for coke, and the syrup to make all six of the drinks was drawn from the same container in each case. Mr. Roberts and I then went to the store of H. M. Todd, at Jackson, Miss., and we made a spigot test there, one of us calling for dope and the other for Coca-Cola, and later going back and one calling for Coca-Cola and the other for coke, observing at the time which spigot the syrup was drawn from to make the drinks, and the syrup to make all the drinks was drawn from the same container. I was also in Kosciusko, Miss., and while there went to the store of Owsley & Pearman in company with Mr. Carmack, who was assisting me as a witness. We went in and called for Coca-Cola and were served with a drink. Then I asked the dispenser to fill me a six or eight ounce bottle with Coca-Cola syrup, which he did and filled it from the same container that he had served the drinks from. We made a second visit there and the same thing occurred as on the first occasion, and we got another sample of syrup. I wrote the label on Plaintiff's Rebuttal Exhibit No. 125. That exhibit is the first sample that I purchased at Owsley & Bearman's store. The dispenser filled that bottle with syrup out of the container that he had served the drinks from. After we got the syrup Mr. Carmack and I carried it to my room in the hotel and sealed and labeled it. We made no change [1696] in

(Deposition of David Emory Bolton.)

the syrup from the time we received it until the time we sealed it. I do not remember whether I expressed that on that particular day or whether I waited until I finished my investigation and expressed it to Mr. Pierce. Plaintiff's Rebuttal Exhibit 126 bears my name on the label. This is the second sample that we got from Owsley & Bearman's store. We purchased the first sample on the 18th, the next day, the 19th being Sunday the store was closed, but we purchased Exhibit 126 on October 20th, 1913. After getting the syrup in the bottle I carried it to the hotel and sealed it and labeled it the same as I did with exhibit 125. No change was made in the syrup from the time I got it from the dispenser until the time I sealed it up and labeled it. After getting exhibit 126 I expressed the sample to Mr. Pierce at Atlanta, Georgia. On September 15, 1914, I went to the place of Jackson & Boyd, at Kosciusko, Miss., and made a spigot test there, first calling for Coca-Cola, and then later calling for dope and coke, as the case might be, and observing the spigot the syrup was drawn from to make the drinks. I observed that the syrup used to make the drinks served in response to all three calls was drawn from the same container. Yes, sir, I called on the Terminal Pharmacy, E. A. Sharp, proprietor for the purpose of securing and to secure an agreement, and I did secure an agreement from Dr. Sharp. On Feb. 18, 1915, I went to the Hyde Drug Co. at Ellisville, Miss. and made a spigot test. First calling for Coca-Cola, and then later calling for dope, and later still for

(Deposition of David Emory Bolton.)

coke, and observing the spigot the syrup was drawn from to make those drinks. The syrup to make the drinks served in response to orders for dope and coke, was drawn from one container, [1697] and syrup to make the drinks on orders for Coca-Cola was drawn from another and separate container. I think I can tell the spigots from which the syrup to make the drinks were drawn at the K. W. N. Pharmacy, Spartanburg, S. C., without referring to my notes, the syrup to make them as drawn from the second to the right center of the fountain, plain, no label on the plunger that I could see. At R. A. Thorn's at Meridian, Miss., the syrup was drawn from the first spigot to the right of the center of the fountain, labeled Coca-Cola. At the Corner Drug-Store, Jackson, Miss., the syrup was taken from the first spigot to the right of the second carbonating arm, container labeled "Vanilla." At the H. M. Tood store, Jackson, Miss., the syrup was drawn from the second container to the left of the center, labeled Coca-Cola. At Owsley & Bearman's store, Kosciusko, Miss., the syrup was drawn from the 7th spigot on the fountain to the right from the entrance to the store. The position of the spigot in each case is given as the position when I was facing the fountain. At Jackson & Boyd's drug-store at Kosciusko, Miss., the syrup was drawn from the first spigot to the left of the center of the fountain, labeled "Strawberry." I did not make a spigot test at the Terminal Pharmacy in Jacksonville, Fla. At the Hyde Drug Co., Ellisville, Miss., the syrup to make the drink in re-



(Deposition of David Emory Bolton.)

sponse to orders for dope and coke was drawn from the first spigot to the left of the center, labeled lemon, and for the order for Coca-Cola, the syrup was drawn from the first spigot to the right of the center, labeled Coca-Cola. I was at the Hyde Drug Co. on February 18, 1915. Defendant's Exhibit No. 15, being an exhibit [1698] to the evidence of E. A. Sharp, taken at Atlanta, Ga., on Feb. 18, 1915, is the agreement which I procured E. A. Sharp to enter into.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibits 125 and 126.)

Cross-examination by Mr. LITTLETON.

Yes, sir; I have testified in this case before. In my original testimony I said I had been employed by the Coca-Cola Company since April, 1914, and that prior to that time I had been with the Pinkerton Detective Agency since 1911. I came with the Coca-Cola Company after Mr. Pierce did. I had done work prior to that time for the Coca-Cola Company—this same character of work. I do not remember how long. I get a stipulated salary and expenses for this detective work which I do. When I was with the Pinkerton Agency I started at \$75.00 per month, and when I went with the Coca-Cola Company my pay was increased to \$95.00 a month. Since I have been with the Coca-Cola Company my pay has been raised \$5.00 a month, so that I now get \$100.00 per month. I have only testified once for the Coca-Cola Company, and that was in this case, although I have made affidavit, I believe, in one other case—the case

(Deposition of David Emory Bolton.)

brought by the Coca-Cola Company against the Whitehead Drug Co. at Durant, Miss. Plaintiff's rebuttal Exhibits 125 and 126 were gotten at Kosciusko, Miss., from Ousley & Bearman, and they are the only bottles I got at that town. These bottles are not in the same condition they were in when I last seen them. The seal has been broken at the top. Yes, sir; I swear positively that the contents of these exhibits is the same contents that was in them when I last saw them. No, sir, I did not open the bottle and I was not present [1699] when it was opened. You ask how long it has been since I last saw these bottles; the last time I saw them was when I expressed them from Kosciusko, Miss., to Mr. Pierce in 1913. I would swear that it is the same contents in those bottles now that was in there when I last saw them, but not to my personal knowledge. It is possible that the contents of those botles have been removed and other contents substituted since I last saw them. The fact of the business is, the entire contents of Plaintiff's Rebuttal Exhibit 125 has been removed. No one was present but Mr. Lever and myself at the time I had this conversation with him in Spartanburg, S. C. The matter just lies between me and Mr. Lever. The conversation occurred in the afternoon sometime, I do not remember exactly the time, nor do I remember whereabouts in the store we were standing. Mr. Massey, whom I procured as a witness in Union, Miss., was introduced to me by Mr. Dan Baxter, the Coca-Cola bottler at Meridian, Miss. I do not think Mr. Massey was working at that time.

(Deposition of David Emory Bolton.)

You ask if he was another loafer. I do not know about that. I offered him \$2.00 a day for his services as a witness. He assisted me one afternoon at Meridian, Miss. He never assisted me at Union, Miss. He assisted me at R. A. Thorne's Union Drug-Store at Meridian, Miss., on Feby. 24, 1915. He made two visits to that store with me, and then made two other calls with me at another store, and these four calls were the only ones which Massey made in Meridian, Miss., with me, so that I paid him at the rate of fifty cents per call. Mr. Roberts, who accompanied me in Jackson, Miss., was introduced to me by Mr. Boyd, the [1700] Jackson, Miss., Coca-Cola bottler. Mr. Roberts did not have any occupation at the time that I know of. He accompanied me to the Corner Drug-Store and to Todd's. I paid him at the rate of \$2.00 per day. He worked a half day and so I gave him a dollar. Mr. Cammack, who assisted me at Kosciusko, Miss., was with the Pinkerton Detective Agency, the last time I knew of him, and he was with that agency at the time he accompanied me. He was not then in the employ of the Coca-Cola Co., but he was assigned to work for the Coca-Cola Co. by the Pinkerton people.

**Deposition of Hoke Smith Leigh, for Plaintiff (In Rebuttal).**

HOKE SMITH LEIGH.

Direct Examination by Mr. HIRSCH.

I am 22 years old, and reside at Jacksonville, Fla. I am in the employ of the Coca-Cola Company, and



(Deposition of Hoke Smith Leigh.)

have been since April, 1914. I know Mr. R. A. Thorne of Meridian, Miss. I registered at his hotel, the Union Hotel at Meridian, Miss. He ran a drug-store and soda-fountain in connection with his hotel. You ask if I ever went into his place of business at one time, and thumped a Coca-Cola barrel, and said, "Mr. Thorne, you will need another barrel before I get back"; I do not know that those are the exact words, but we walked back in the store and were discussing the matter of my taking an order from him. I do not recall taking the order from him. I saw another barrel when I went back in his place, and Mr. Thorne told me it was Ko-Nut. I did not ask him, "What are you doing [1701] with that damned stuff in your place of business?" I did not use any cuss words. I asked him what he was going to do with any other kind of syrup he had. You ask if he said to me, "It is good stuff, and I will give you a drink of it, I think you will like it." I think he wanted me to take a drink. I told him I did not want it. You ask if I said to him, "Any damned man that would handle that rotten stuff and let it come into his place of business would steal." No, sir, I didn't use that word. I asked him at first what he was doing with it and he told me he was using it, that some people did not know one drink from another and some people did not care much about it and he used it for them, and I told him that I thought anybody that would do anything like that and take advantage of anybody because of their ignorance would steal, the same as any other thing. I did not use the

(Deposition of Hoke Smith Leigh.)

words, "any damned man." Yes, sir, he said to me, "Hold on, Mr. Leigh, you are going a little bit too far; don't accuse me of that." I repeated what I said at first; I did not use the curse words, he denied using the substitute or taking advantage of anybody. I do not recall his saying, "Any man that says I steal tells a God-damned lie." You ask if I made a pass at him to strike him. I do not know who started it, maybe I did, it just started. Yes, sir, he hit me all right and I hit him, too. We fought behind the prescription case and then out through the front of the store, each striking at the other, and we kept at it out in the street. You ask if I told him, back of the prescription case, "I will take my name off your hotel register and never come inside the hotel again." I do not know that I put it that way, but I put the proposition to him that we had always tried to treat [1702] him honestly, and had stopped at his place, or something of that nature. I did not use the expression, I was going to check out right away. The reason I checked out was not because he was handling some other drink, but because I had a fight with him. Yes, sir, the altercation I had with Mr. Thorne started in this way: I was in his place and we got into the back there, and of course I noticed the other barrel, and I just asked him what it was. As I remember, he told me it was Ko-Nut Syrup, and I asked him, "What are you doing with this, does anybody in town know what Ko-Nut is?" And he said, "Well, I handle a couple of different drinks here all the time. I do not handle Coca-Cola exclusively.

(Deposition of Hoke Smith Leigh.)

Some people do not know one from another," and he would just as soon give that one as Coca-Cola, and if he could get away with it, why he would give him Ko-Nut, and of course I tried to look out for our interest, and was doing my best to use every argument I knew of to swing him over, and that was all there was to it.

Cross-examination by Mr. LITTLETON.

No, sir, I could not tell by looking at the barrel I thumped—the substitute barrel—what kind of a barrel it was, because I do not recall that it had any label on it. You ask if it requires a label to distinguish the barrels, one from the other, in my mind; well, if there is any doubt, you ask if there is ever any room for doubt, and if I ever run across an occasion to doubt except from seeing the labels or the absence of it; I see a lot of red barrels that do not have labels and I always doubt it right away. You ask if I can tell the difference in the barrels except by the labels on them; I generally know. The boys in the factory mark them with a black mark and [1703] sometimes distinguish them that way, but I look to the label more than anything else. You ask if, aside from the marks and labels there is any way to distinguish one from the other; I do not know. Constant association with the barrels that we use around there, I can always recognize one on sight. I recognize it by the marks on the barrel and the red color, the label on the barrel—all those things taken into consideration. When in doubt it would be settled, in my mind, by the Coca-Cola label. You ask if I can distinguish the



(Deposition of Hoke Smith Leigh.)

color of the Coca-Coca barrel from all these other barrels; I did not say, necessarily, it could be done, I can generally tell, but if there is any doubt a Coca-Cola label on the barrel settles the doubt. If there is not one on there, I doubt its genuineness. You ask if I could tell just by looking at the barrel without seeing the label; not to get right down to the point of distinguishing one from the other, but as a kind of constant association seeing those barrels in different places—I think we use the same color—all the different plants, and a fellow can always recognize his own barrels, but, of course, there would be room for doubt, though. I just wanted to know what it was when I asked him. All these substitute barrels look just about alike, all I have seen or noticed, mostly. It is pretty hard to tell one of those from the others. Yes, sir; I guess it is. I am certain that Mr. Thorne told me it was Ko-Nut in that barrel and not Koke or Dope. The word Koke does not sound to me anything like the word Ko-Nut; there is no resemblance at all between the two in sound. [1704]

**Deposition of Sam Friend, for Plaintiff (In Rebuttal).**

SAM FRIEND.

Direct Examination by Mr. HIRSCH.

I have testified in this case before at Dallas, Texas. On Jan. 4, 1915, I was in the place of E. A. Sharp at the Terminal Pharmacy, Jacksonville, Fla., in company with Mr. Beaumont of Atlanta, Ga. We went into the fountain and Mr. Beaumont asked for

(Deposition of Sam Friend.)

a dope and I asked for Coca-Cola. I would like to add to this statement that before this visit on Jan. 4, at 9:00 A. M., 12:00 M., and 3:00 P. M., I asked for Coca-Cola, and at 5:00 P. M. and 7:00 P. M., I asked for Dope, and the syrup used in all these drinks was drawn from the same container. I was in there with Mr. Beaumont on Jany. 5, 1915. I asked for Coca-Cola and he asked for dope. The syrup to make these drinks was drawn from the first container to the left of the center of the fountain, as I faced the fountain, labeled "Coffee." I then presented a thermos bottle to the dispenser and owner Mr. Sharp, and asked that he place in that bottle enough Coca-Cola syrup to make six glasses of Coca-Cola, and Mr. Sharp then drew from the same container from which the drinks Coca-Cola and dope had been drawn about eight ounces of syrup, which he put into the thermos bottle. I then transferred that syrup in my room at the Burbridge Hotel into the bottle filed as Plaintiff's Rebuttal Exhibit No. 122, in the presence of Mr. Beaumont. I wrote that label and sealed the bottle. There was no change made in the syrup from the time I got it in the thermos bottle up to and through the time I sealed the bottle. The thermos bottle was clean. We again went there the next day and Mr. Beaumont asked for dope and I asked for Coco-Cola. The syrup was drawn from the [1705] same container, which was the same container the drinks had been drawn from the previous day, and that the sample of syrup had been drawn from. I again asked the dispenser, Mr. Sharp, to put into a

(Deposition of Sam Friend.)

thermos bottle enough Coca-Cola syrup to make six glasses of Coca-Cola, and Mr. Sharp drew from a different container, from which he had served our drinks, which was the first container to the left—from the third to the left of the center of the fountain labeled “Coca-Cola,” and placed it in the thermos bottle. That thermos bottle was clean. I then poured the syrup from the thermos bottle into this bottle filed as Plaintiff’s Rebuttal Exhibit No. 123, I wrote the label in that bottle and sealed the bottle. I expressed both exhibits 122 and 123 to H. B. Pearce, 202 Candler Bldg., Atlanta, Ga. Neither Mr. Beaumont nor I made any change in the syrup from the time we got it until we put it in this bottle. When I got the sample I put it in my satchel. I labeled each sample immediately after securing it and then put it in those bottles. I labeled these after we got back to the hotel. In this particular instance I did carry a satchel to the different places. Yes, sir; I put these two samples there into the satchel. After I got this sample I went to the hotel and deposited it and labeled it before I put the other sample in the satchel. I was in the place of business of Fried & Haas at Nashville, Tenn., on Oct. 19, 1914. At 2:00 P. M., I entered and asked for dope. I remained in there fifteen minutes and heard two calls for Coca-Cola and one for coke. The syrup used in making all these drinks, including my drink, was drawn from the same container, which was the third container to the right [1706] of the first carbonated water container, and from all appearances, that I could see, was unlabeled.



(Deposition of Sam Friend.)

At 7:30 I went in and asked for Coca-Cola and remained in there for ten minutes. I heard one call for dope and two calls for Coca-Cola, and the syrup used in making all these drinks was drawn from the same container, which was the one I have just previously described. On Oct. 20th, at 8:30 A. M., I went in and asked for Coca-Cola. I remained there 20 minutes and heard three calls for Coca-Cola and three for dope and the syrup used in making these drinks was drawn from the same container, which I have previously described. At 8:45 P. M. on Oct. 20th, I, accompanied by Mr. A. Quick, Jr., Manager of the Regal Shoe Company, Nashville, went in when I asked to be served with a dope and Mr. Quick asked for Coca-Cola. The syrup used in making both of these drinks was drawn from the same container, I have previously described, which was the third to the right of the first carbonated water container, unlabeled. Mr. Quick, in my presence, then presented a thermos bottle to the dispenser and asked that he put into the same enough Coca-Cola syrup to make eight glasses of Coca-Cola. The dispenser drew the syrup from the same container from which our orders for Coca-Cola and dope had been drawn, which I have just previously described. The dispenser poured about eight ounces of syrup into the bottle for which he was paid forty cents. Plaintiff's Rebuttal Exhibit 127 is presented to me and I am asked if I recognize it, and if I wrote the label, and if my name is on it; I did not write the label; Mr. Quick wrote the label in my presence. After the syrup was put

(Deposition of Sam Friend.)

into the [1707] thermos bottle, we went directly across the street to the basement of the Duncan Hotel, where the syrup was poured into this bottle, and was then taken to my room in the Savoy Hotel and immediately sealed by me. No change was made in the syrup from the time I received it until I sealed it. That is the bottle I put the syrup in.

(Plaintiff here tendered and offered in evidence, Plaintiff's Rebuttal Exhibits 122 and 123.)

On Oct. 21, at 9:00 A. M., I again went to the fountain of Freid & Haas and called for Coca-Cola. I remained there ten minutes and heard two calls for Coca-Cola and one for dope. The syrup used in making all these drinks was drawn from the same container from which all the drinks for dope and Coca-Cola were served us on yesterday—that is, Oct. 20th—and was the same container from which the sample of syrup was drawn on Oct. 20th. At 10:00 A. M., I again went there and asked for dope, I remained there ten minutes and heard two calls for dope and two calls for Coca-Cola. The syrup used in making all these drinks was drawn from the same container, which I have previously described, on Oct. 21st, at 12 noon, together with Mr. Quick; I called at the fountain and asked for dope and Mr. Quick for Coca-Cola. The syrup used in making both of these drinks was drawn from the same container which I have previously described. In my presence, Mr. Quick presented the thermos bottle to the dispenser, and asked that he place in same enough Coca-Cola syrup to make eight glasses of Coca-Cola, and the

(Deposition of Sam Friend.)

dispenser then drew from the same container from which the drinks of Coca-Cola and dope had been served [1708] about eight ounces of syrup which he placed in the thermos bottle, and for which he charged Mr. Quick fifty cents. I did not ask for koke that day. This syrup was drawn from the same container as the drinks had been drawn from. After we got the syrup in the thermos bottle we went to the basement of the Duncan Hotel and poured same into an empty bottle. Mr. Quick made out the label on Plaintiff's Rebuttal Exhibit 128 and placed it on the bottle in my room at the Savoy Hotel. This bottle was sealed by myself and in Mr. Quick's presence. It is the bottle I put the syrup in that I testified I got on Oct. 21st. I sealed the bottle myself. I brought Plaintiff's Rebuttal Exhibits 127 and 128 into Atlanta, on Friday night, Oct. 23d, and delivered the same to Mr. H. B. Pearce, on Saturday morning, Oct. 24th; there was no change made in the syrup from the time I got it at the store until I sealed the bottles. The thermos bottles into which the syrup was first placed and the other bottles in which it was subsequently placed were both clean at the time the syrup was put into them.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibits 128 and 128.)

I had an interview with Mr. Regan, dispenser at Fried & Haas' store and asked him as to the approximate amount of Coca-Cola syrup they would serve.

(Objected to by defendants because improper rebuttal, because no foundation was laid for the testi-



(Deposition of Sam Friend.)

mony; because hearsay; and because incompetent, irrelevant and immaterial, and defendants move to strike the same. Objection and motion overruled. Exception.)

I asked him as to the approximate amount of Coca-Cola they would serve each day. Mr. Regan said that [1709] during the hot months they would serve at least fifteen gallons of Coca-Cola per day; that only last night he had filled the container three times in one hour's time, which held one gallon of syrup, and he was using approximately, now, ten gallons of Coca-Cola a day. I also had an interview with Mr. T. Reynolds, a former dispenser for Fried & Haas, who was then employed at "Calosky's" fountain, who stated he had worked for Fried & Haas for three years, up to about June, 1914, and always dispensed a substitute for Coca-Cola, which was Fletcher's Cola, which came into the place in red barrels, and the only Coca-Cola they kept in the fountain was at the end of the fountain in case a Coca-Cola representative came in and asked for a sample of Coca-Cola syrup, and then they would have Coca-Cola syrup to sell him.

(Statement as to what Reynolds said is objected to because hearsay; because incompetent; irrelevant and immaterial; because improper rebuttal; and because no foundation was laid for it. Overruled. Exception.)

Yes, sir; I had an interview with Mr. Haas, one of the owners of Fried & Haas. After I identified myself as the representative of the Coca-Cola Company,

(Deposition of Sam Friend.)

I asked him his understanding of the words coke and dope when used at a soda-fountain, to which Mr. Haas replied he did not know what they meant, and that it seemed strange to him that I should come to him to find out what it meant, and why I did not go to the consumers. I then asked Mr. Haas to allow me to make a consumer's test there by having the dispenser ask at his place of business when persons asked for coke or dope, what they meant, and that he would soon by that determine what these terms meant, to which Mr. Haas emphatically refused to allow such a test [1710] to be made. Yes, sir, I have been to the place of business of Miller at Chattanooga, Tenn. I will have to look on the bottle to tell when I was there. I am presented with Plaintiff's Rebuttal Exhibits 129 and 130, and am asked who made out the labels attached to those bottles; Mr. J. C. Withers, of Atlanta, Ga., made out those labels in my presence. My signature is on them. I was at the place of business of Miller on November 9th, and November 19th, 1913. Both myself and Mr. Withers asked for drinks of Coca-Cola, and after the drinks for Coca-Cola had been served, we presented these particular bottles, Exhibits 129 and 130, and asked that the same be filled with Coca-Cola and they were filled with syrup. We asked for Coca-Cola. These bottles were filled with syrup drawn from the same container from which the drinks were made, which was a "Fantaz" container setting on the fountain. The dispenser put the syrup in these two bottles, Exhibits

(Deposition of Sam Friend.)

129 and 130. After which I immediately sealed and labeled them in the Patten Hotel at Chattanooga, and later shipped them to Dr. H. C. Fuller, care of The Institute of Industrial Research, Washington, D. C.

(Plaintiff here tendered and offered in evidence, Plaintiff's Rebuttal Exhibits 129 and 130.)

From the time the dispenser put the syrup into the bottles marked Exhibits 129 and 130, up to the time and including the time I sealed them and sent them to Dr. Fuller, there was no change made in the syrups, and no additions thereto, or eliminations therefrom. Yes, sir; I have been to the place of business of C. P. Embrey, of Chattanooga, but I will have to look at the bottles to determine the exact date. As to Plaintiff's Rebuttal [1711] Exhibit No. 131; I entered C. P. Embrey's and asked to be served with a drink of Coca-Cola, the syrup used in making the drink was drawn from the first container to the left, from the entrance of the store, labeled sarsaparilla. I then presented this bottle to the dispenser and asked that he fill the same with Coca-Cola syrup and he went to the rear of the store and came back with this bottle filled, for which I paid him thirty cents. I could not say from where the syrup was drawn. I handed him this particular bottle and did not make any change in the syrup. I did not write that label. It was written by J. C. Withers but I sealed the bottle, after which I shipped it to Dr. H. C. Fuller of Washington, D. C.. No change was made in the syrup from the time it was



(Deposition of Sam Friend.)

put in the bottle until the time I shipped it to Dr. Fuller. On Nov. 7th, 1913, Mr. Withers and myself asked for Coca-Cola. The syrup used in making the drinks was drawn from the first container on the fountain to the left of the entrance of the store, labeled "Sarsaparilla." We then presented this bottle, marked Plaintiff's Rebuttal Exhibit 132, to the dispenser and asked that he fill the same with Coca-Cola syrup, and he then filled the bottle from the same container from which the drinks of Coca-Cola had been served, to Mr. Withers and myself. I then took the bottle to the Hotel Patten, sealed and labeled it. That is my name on the label. I did not make any change in the syrup. Later I shipped it to Dr. H. C. Fuller at Washington, D. C. On Nov. 8th, 1913, accompanied by Mr. Withers, we asked for Coca-Cola and the syrup used was drawn from the same container from which the drinks of Coca-Cola served on Nov. 7th, was drawn, [1712] and from which the sample of syrup was drawn on Nov. 7th. I then presented this bottle to the dispenser and asked that he fill same with Coca-Cola syrup. He filled it from the same container from which the drinks of Coca-Cola had been served us. I then took this bottle to the Patten Hotel, sealed and labeled it in Mr. Withers presence and later shipped it to Dr. Fuller, at Washington, D. C. I did not make any change in the syrup at any time after I received it.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibits Nos. 131, 132 and 133.)

I myself wrote out the label on Exhibit 133.

(Deposition of Sam Friend.)

I was in Hattiesburg, Miss., March 25th, 1914, and called at the Owl Drug Store at 9:30 A. M., and asked for Coca-Cola. The syrup was drawn from the 3d container left of the right end of the fountain, labeled Coca-Cola. I remained at the fountain 25 minutes and heard one call for Coca-Cola, which was drawn from the third container and the fifth container left of the right end of the fountain. The third container was labeled Coca-Cola, and the fifth labeled "Orange." Again at 12:30 noon, on March 25th, I called there and asked for Coca-Cola. Half of the syrup used was drawn from the third and half from the fifth container, left from the right end of the fountain. I remained there forty-five minutes and heard two calls for Coca-Cola and the syrup for all these was drawn half from the third and half from the fifth container left of the right end of the fountain. At 2:30 P. M., I again called there and asked for Coca-Cola and the syrup used was drawn from the same above-described containers. At 5:00 P. M., I [1713] went there and asked for Coca-Cola, and remained one hour and fifteen minutes and heard three calls for Coca-Cola, two of which was drawn from the third and fifth containers, and one from the second container. During the day I heard eight calls for dope and coke, which were drawn, some from the fifth and some from the third containers, left of the right end of the fountain. On March 26th, at 9:00 A. M., I called and asked for Coca-Cola, which was served from the 5th container left of the right end of the fountain, labeled "Orange." I re-

(Deposition of Sam Friend.)

mained there thirty minutes and heard two calls for Coca-Cola. One was drawn from the fifth container left of the right end of the fountain, and one from the third container left of the right end. On March 26th, at 10:45 A. M., accompanied by B. L. Dever, and N. I. Green, both residents of Hattiesburg, Miss., I again went there, and all of us asked for Coca-Cola. The syrup used in making all these drinks was drawn from the fifth container left of the right end of the fountain, labeled Coca-Cola. On March 26th, at 1:30 P. M., I called at the fountain and asked for Coca-Cola. The syrup used was drawn from the fourth container, left of the right end of the fountain, labeled "Coca-Cola." I remained there twenty-five minutes and heard five calls for Coca-Cola. Two were drawn from the fourth container, one drawn from the third container and one from the fifth container. On March 26th, at 2:45 P. M., with Mr. Green and Mr. Dever, we again called at this fountain, Mr. Green ordered Coca-Cola, Mr. Dever dope and I Coca-Cola,—Mr. Dever dope, Mr. Green Coca-Cola and I Coca-Cola. The syrup to make Mr. Green's and my drink was drawn from the fifth container left of the right end of the [1714] fountain, labeled "Orange," and Mr. Dever's drink was drawn from the fourth container left of the right end, labeled "Coca-Cola." On March 26th at 4 P. M., accompanied by Mr. L. L. P'Pool, we called at the fountain. Both ordered Coca-Cola, which was drawn from the third container left of the right end labeled "Coca-Cola." On March 26th, at 5:10 P. M.,



(Deposition of Sam Friend.)

accompanied by Mr. B. L. Dever, I asked for Coca-Cola and Mr. Dever for dope. The syrup was drawn from the same container, the fourth left of the right end labeled "Coca-Cola." On March 27th at 9:15 A. M., I called and asked for Coca-Cola, I remained there thirty minutes and heard four calls for dope. Three were drawn from the third container left of the right end of the fountain labeled "Coca-Cola," and one from the fifth container labeled "Orange." My drink was drawn from the third container, labeled "Coca-Cola," the same container from which the three drinks of dope were drawn. On March 27th, accompanied by Mr. P'Poole, at 10:30 A. M., I asked for Coca-Cola and Mr. P'Poole asked for dope, and the syrup used in making both of these drinks was drawn from the same container, which was the third left of the right end of the fountain labeled "Coca-Cola." On March 27th, at 1:10 P. M., accompanied by Mr. P'Poole, I asked for Coca-Cola and Mr. P'Poole for dope. The syrup used was drawn from the same container, which was the third left of the right end, labeled "Coca-Cola." I remained for 45 minutes and heard five calls for dope, two were served from the third container left of the right end of the fountain, two from the fourth container left of the right end of the fountain, and one from the fifth container left of the right end of fountain. [1715] On March 27th at 2:45 P. M., accompanied by Mr. N. I. Green, I asked for Coca-Cola and Mr. Green for dope, and the syrup used was drawn from the same container, the third left

(Deposition of Sam Friend.)

of the right end of the fountain, labeled "Coca-Cola." On March 27th, at 4:30 P. M., accompanied by Mr. P'Poole, both of us asked for Coca-Cola. The syrup used was drawn from the same container, the third left from the right end of the fountain labeled "Coca-Cola." On March 27th, at 7 P. M., I asked for a Coca-Cola, and half of the syrup was drawn from the third container and half from the fifth, left of the right end of the fountain. I remained there thirty-five minutes and heard three calls for dope. Two were drawn from the fourth container left of the right end of the fountain, and one from the third container left of the right end. On March 28th, at 9 A. M., I asked for a Coca-Cola and remained there thirty minutes, heard three calls for dope, one for Coca-Cola. All these drinks, including mine, were drawn from the same container, the third left of the right end of the fountain, labeled "Coca-Cola." On March 28th, at noon, accompanied by Mr. Green, I asked for a Coca-Cola and Mr. Green for a dope. The syrup used in making these drinks was drawn from the same container, the third left of the right end of the fountain, labeled Coca-Cola. I remained in the vicinity of the fountain twenty minutes and heard two calls for dope and three for Coca-Cola. Two of the calls for Coca-Cola were drawn from the third container left of the right end of the fountain, labeled "Coca-Cola," [1716] and one from the fourth container, left right end of fountain. All of the drinks for dope were drawn from the third container left of the right

(Deposition of Sam Friend.)

end of the fountain, which was the same container from which the drinks Coca-Cola and dope were served Mr. Green and myself. On March 28th, at 5:30 P. M., accompanied by Mr. P'Poole, both of us asked for Coca-Cola, which was drawn from the third container left of the right end of the fountain, labeled Coca-Cola. I remained there 25 minutes and heard six calls for dope and two for Coca-Cola. Four of the calls for dope were drawn from the third container left of right end of the fountain, and one from the fourth container and one from the fifth. All of the calls for Coca-Cola were drawn from the third container left of right end of fountain, from which four of the calls for dope had been drawn. On March 29th, at 9 A. M., I called and asked for Coca-Cola. I remained there 15 minutes and heard two calls for dope and one for Coca-Cola. All of these drinks were drawn from the same container, which was the fifth left of the right end of fountain, labeled "Orange." On March 29th, at 11 A. M., I again called and asked for Coca-Cola and remained there 35 minutes. I heard five calls for dope and three for Coca-Cola. Three of the dope calls were drawn from the third container left of right end of fountain, labeled Coca-Cola, and two from the fifth container left of right end of fountain, labeled "Orange." Two calls for Coca-Cola were drawn from the fifth container left of right end of fountain and one from the fourth. On [1717] March 29th, at 3 P. M., accompanied by Mr. P'Poole, we called and asked for Coca-Cola. The syrup used for



(Deposition of Sam Friend.)

these drinks was drawn from the third container left, or the right end of the fountain, labeled "Coca-Cola." On March 29th, at 5:30 P. M., Mr. P'Poole and I asked for Coca-Cola, I remained there fifteen minutes and heard two calls for Coca-Cola, and one for dope. All of these drinks, including those ordered by Mr. P'Poole and myself, were drawn from the same container, which was the third to left of the right end of fountain, labeled "Coca-Cola."

I was in Nashville, Tenn., and went to the Warner Drug Co., on Oct. 19th, 1914, accompanied by Mr. I. Roberts of Nashville. We called at the fountain and I asked for coke and Mr. Roberts asked for Coca-Cola. While we were at the fountain I heard two calls for dope and one for Coca-Cola. The syrup used in making all these drinks was drawn from the same container, the third left of the second center on the second string of pumps, labeled "Coca-Cola." At 2 P. M., on the same date, accompanied by Mr. Roberts, I called there and asked for dope and Mr. Roberts for Coca-Cola. While there we heard one call for dope and two for Coca-Cola. The syrup used for all these drinks was drawn from the same container which I have described. On Oct. 20th, at 9:30 A. M., accompanied by Mr. Roberts, I called for dope and he called for Coca-Cola. While there at the fountain we heard two calls for dope and one for Coca-Cola. The syrup used for making all these drinks was drawn from the same container which I have described. At 7:15 P. M., accompanied by Mr. Abe Quick, Jr., we called at the fountain. I asked

(Deposition of Sam Friend.)

for dope and Mr. Quick for Coca-Cola. [1717½]  
The syrup used was drawn from the same container which I have described. At 9:10 P. M., accompanied by Mr. Quick, I called for dope and he called for Coca-Cola. The syrup used was drawn from the same container, which I have described, for the drinks. After the drinks had been served Mr. Quick and myself, Mr. Quick presented the thermos bottle to dispenser and asked that he put enough syrup in the thermos bottle to make six drinks of Coca-Cola. The dispenser then drew from the same container from which all these drinks of dope and Coca-Cola had been drawn, Friday, Oct. 20th, and Oct. 19th, about eight ounces of syrup, which he poured into the thermos bottle, which was clean. I then went out and poured the same into an empty eight-ounce bottle, which was also clean. Plaintiff's Rebuttal Exhibit No. 134, is the bottle into which I poured the syrup from the thermos bottle, and has my name on the label attached thereto. I took the same to my room at the hotel, where the label was made out by Mr. Quick in my presence and placed on the bottle, by him, and then the bottle was sealed with the mark of identification put on the seal and label, neither Mr. Quick nor I made any changes in the syrup in that bottle at all. I then brought the bottle into Mr. H. B. Pierce. (Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibit No. 134.) On Oct. 21, at 9:15 A. M., I asked for a Coca-Cola, and while drinking it I heard two calls for dope and the syrup used in making all of these, including my

(Deposition of Sam Friend.)

own, was drawn from the same container from which all the drinks had been served on October 19th and 20th. At 11:30 A. M., I called at the fountain and asked for Coca-Cola, and heard one call for dope [1718] the syrup used was drawn from the same container which I have previously described, in making both drinks. At 12 P. M., I called at the fountain, accompanied by Mr. Quick, and asked for a dope while he asked for Coca-Cola. The syrup used to make these drinks was drawn from the same container, which I have heretofore described. Mr. Quick then presented a thermos bottle to the dispenser and asked that he put in the same enough Coca-Cola syrup to make six glasses of Coca-Cola, and the dispenser then drew about eight ounces of syrup from the same container from which the drinks of dope and Coca-Cola had been previously served, and poured the same into the thermos bottle, which was kept by Mr. Quick. We then went to the Duncan Hotel and poured it into an empty eight-ounce bottle, both the thermos bottle and the eight-ounce bottle were clean when the syrup was poured into them. Plaintiff's Rebuttal Exhibit 135 is the bottle into which the syrup was poured and bears a label which I signed. After pouring the syrup into the bottle I wrote out this label and put on the seal over the top. No changes were made in the syrup at any time. I then sent it to Mr. H. B. Pierce, Atlanta, Ga.

(Plaintiff here tendered and offered in evidence Plaintiff's Rebuttal Exhibit 135.)



(Deposition of Sam Friend.)

Cross-examination by Mr. LITTLETON.

In giving my testimony which I have just given, I have been reading from my notes. I have no independent recollection of these occurrences aside from the notes. On January 5th, 1915, I made only one visit to the Terminal Pharmacy, Jacksonville, in company with Mr. Beaumont, and only one visit there on the 6th, in company with him. [1719] On the 5th, when Mr. Beaumont and I left the Terminal Pharmacy, after our visit there on that day, we went to the hotel, and on our way there we went by the Adams Street Pharmacy. When we went into that store, I asked for a Coca-Cola and Mr. Beaumont for a dope, that is all we did there. We then went straight to the Burbridge Hotel. We did not do anything else so far as my recollection goes. The bottle which I have identified as the one into which I put the syrup gotten from the Terminal Pharmacy on January 5th, I took to my room at the hotel in a handbag. That was the only bottle I had in the handbag. I got the bottle at the Burbridge Hotel Bar, the hotel at which we were stopping. I do not think we got it at a bar on the way to the hotel. On the second day, January 6th, after we left the Terminal Pharmacy, we went straight to the Burbridge Hotel, is my recollection, and not anywhere else. We went straight to the hotel and poured the syrup out of the thermos bottle into the bottle I have identified as the one into which I put the second sample purchased on January 6th. My recollection is we

(Deposition of Sam Friend.)

got that bottle also from the Burbridge Hotel bar. I put that bottle in the grip and then went to the Adams Street Pharmacy, and the 16th Street Pharmacy, and I do not recollect having gone anywhere else. In going from one store to the other, we made the nearest one first. I cannot tell you whether I labeled and sealed both of the bottles except by looking at them. (Examining bottles.) I sealed and labeled both of them. The seals on both of them have been broken and the bottles have evidently been opened. I cannot swear that they now have the same contents, because those bottles have been [1720] out of my possession since January 6th, 1915. Yes, sir, I have seen Mr. Beaumont to-day. I saw him after he testified in this case. Yes, sir; I have talked to him about the times about which he and I testified, before he testified in this case. I refreshed his recollection from my notes. When we went in one asked for dope and the other for Coca-Cola, or one asked for dope and the other for coke—it was a prearranged affair. It was prearranged that he should ask for dope and I for Coca-Cola, always. I never asked for dope at any of the places visited at Jacksonville. Nobody told me to testify to that this morning, and nobody read over Beaumont's testimony to me. The prearranged scheme is not always for him to ask for dope and I for Coca-Cola, sometimes I asked for dope and the witness for Coca-Cola, but I always asked for one or the other, sometimes we change, and sometimes I ask for dope and he for

(Deposition of Sam Friend.)

coke, and sometimes the witness asks for dope and I for coke; sometimes we change during the day. But we always have a prearranged scheme on a certain round, as to which one will ask for one thing and which one will ask for the other. That was true at Nashville with my friend Quick, and that was true with Roberts. It was different with Withers, because never any dope was asked for. Aside from Withers it was the same with all the others. I am twenty-six years old. I formerly lived two years in Chattanooga, where I worked at Paul Heyman's wholesale liquor house, and from there I went to the Pinkerton National Detective Agency, because they offered me better pay. To the best of my recollection, this will be the fifth time I have testified for the Coca-Cola Company. Twice in this case and three times in other and different suits, one of which was the suit [1721] at Roanoke, Va., against the Heinze Cigar Store. The other two were the suits against F. F. Mykrantz Co., at Columbus, Ohio, and the suit against the Owl Drug Co., at Hattiesburg, Miss. This fellow, J. C. Withers, who went around Chattanooga with me, was a Pinkerton detective, with the Pinkerton National Detective Agency. At the time he went around with me he was working in the interest of the Coca-Cola Company, and was working for the Pinkerton Agency. B. L. Dever, who accompanied me on my rounds at Hattiesburg, Miss., is a printer at Hattiesburg, and N. I. Green, is the chief clerk of one of the railroads at Hatties-



(Deposition of Sam Friend.)

burg. I was introduced to them by the manager of the Coca-Cola Bottling Works at Hattiesburg, Miss., who asked them to accompany me. I did not pay them; they went with me voluntarily. They entered into these schemes and tricks I have mentioned and left their work to do so. This fellow P'Poole is a brother-in-law or some relation of the manager of the Coca-Cola Bottling Works at Hattiesburg, Miss. Roberts is a traveling salesman for some paper house in Nashville. I paid him \$2.00 per day to accompany me. He only worked one day until his leg was hurt by an automobile—one or two days, I do not remember, and then he was confined to the hospital. I do not remember how I got hold of him, or by whom I was introduced to him. He was a traveling man staying in Nashville, working the city trade. The seals have all been broken on the exhibits I have identified here, but the syrup content in these bottles is the same color and general appearance as the syrup I put in there originally, but I could not swear that it is the same syrup I put in there. I was one of those at Roanoke, Va., [1722] engaged in investigating the Heinz Cigar Store. I took the soda dispenser at the Heinze Cigar Store out with me one night. I took him around to the hotel where I was stopping. He appeared to be about 22 years old. I heard him testify in that case, and I have read his testimony, and he testified that he was seventeen years old. I drank with him in a saloon, but he did not get drunk in my presence. He did not get under

(Deposition of Sam Friend.)

the influence of liquor at all in my presence, but it is a well known fact in Roanoke that he was discharged at the age of twelve from the Roanoke Light & Power Co., for getting drunk, and that he has been drinking whiskey ever since he was seven years old. You ask if I encouraged the boy by drinking with him; I did not encourage him whatsoever, but I did drink with him. You ask where we then went but I want to know which night you are talking about. You say the night we were drinking; well there was several such nights. You mean one of the nights we were drinking? Well, we went to a rooming-house at his invitation. At that rooming-house we saw three girls. Nobody else went with us, just me and this boy was all. The boy's name was Harry Jones. All that time I was seeking to get information from him as to the conduct of his employer's business, and I adopted that means as one means of finding out. I was one of the detectives in Birmingham, a few days ago who was detailed to shadow Steve T. Mayfield. There were two other detectives detailed by the Coca-Cola Company to shadow him besides myself, i. e., Mr. Platt and Mr. Hal Daniel, who came from Atlanta. He was in Birmingham, at the time visiting and I asked him to assist me. I paid him two dollars to assist me in shadowing Steve Mayfield. We shadowed him about a [1723] week. We shadowed Steve Mayfield all that time excepting the day he was in Chattanooga. Yes, sir; we went to the depot with him when he left. We knew he was going

(Deposition of Sam Friend.)

to Chattanooga that night by shadowing his house when he did not show up. Yes, sir; I telephoned his wife and she told me where he was. I was at the train when he came back and saw him come out of the depot. There was two detectives with me most of the time. All three of us stayed together shadowing him. You ask why it took three of us to shadow him. I had instructions from my superiors to do so. Later on we were arrested for shadowing him, all three of us, and we were taken before the Municipal Court in Birmingham, and fined \$25.00 and costs. We made no defense. The cases were appealed. The Municipal Judge stated from the bench at the time he fined us that it was a very aggravated case, but he had no occasion to hear our defense. Yes, sir, I admitted to Steve Mayfield that we had been following him, and the others admitted so, and that we had all been specifically detailed to follow him. Yes, sir, I was introduced to Mr. C. J. Pogue, in the ante-room of the Tutweiler Hotel, the day the testimony was being taken in the Koke case in rebuttal. No, sir, I was not then still following Mr. Mayfield. We quit shadowing him after we were arrested. The detective who operated with me up there at Roanoke testified in that case at Roanoke, Va., while I gave my deposition in Atlanta. No, sir, I did not know that they had a warrant out for me in Roanoke, Va., for enticing a minor into a saloon, until you told me so. [1724]



(Deposition of Sam Friend.)

Redirect Examination by Mr. HIRSCH.

The notes which I read from on my direct examination were made by me right after each transaction, directly after I left the store. Pursuant to request of counsel, I have taken those notes and marked No. 136 on each page from which I have read, and have taken a knife and cut out of the book those pages I have marked.

(Plaintiff here tendered and offered in evidence, as Plaintiff's Rebuttal Exhibit No. 136 the pages of notes referred to.)

Recross-examination by Mr. LITTLETON.

I went to three different stores in Nashville with Mr. A. Quick. We drank twice at each place to my knowledge. I do not know whether we drank more than that or not. I will have to refresh my memory from the notes. I could not tell you whether we visited all three of the places more than twice or otherwise, until I refresh my memory from the notes.

**Deposition of H. B. Pierce, for Plaintiff**

**(In Rebuttal).**

H. B. PIERCE.

Direct Examination by Mr. HIRSCH.

Yes, sir; I have been heretofore sworn in this case. I received Plaintiff's Rebuttal Exhibit 122, by Southern Express on January 7th, 1915, sealed and with a label on it, and I put an additional label on it (indicating) and without breaking the seal sent it on January 8th, to the N. P. Pratt Laboratory, Atlanta,

(Deposition of H. B. Pierce.)

Ga., and received the bottle back again on January 11th, after analysis had been made. When I got the bottle back the seal was broken—in the condition it is now in. I made no change in the contents of that bottle from the [1725] time I received it until I sent it out, or from the time I first received it until the present time. I received Plaintiff's Rebuttal Exhibit 127, via Southern Express, on Oct. 24, 1914, it was sealed and I did not break the seals. I forwarded it by Southern Express to Dr. H. C. Fuller of the Institute of Industrial Research, Washington, D. C. Dr. Fuller brought it back this morning, with the seal broken. I received Plaintiff's Rebuttal Exhibit 134, Oct. 24, 1914, via Southern Express, and later sent it to Dr. H. C. Fuller, of the Institute of Industrial Research via Southern Express. I got it back this morning from Dr. Fuller. I received Plaintiff's Rebuttal Exhibit 123 on the 7th of January, 1915, via Southern Express, and on January 8th, 1915, I sent it as received to the N. P. Pratt, laboratory, Atlanta, Ga., and again received it back from that institution on January 11th, 1915. I received Plaintiff's Rebuttal Exhibit 121 on December 31st, 1914, from Frank Platt in person, and on January 1st, 1915, I sent that exhibit to the N. P. Pratt Laboratory, Atlanta, Georgia, and received same back from that institution on January 7th, 1915. I received Plaintiff's Rebuttal Exhibit 124 on May 10th, 1914, via Southern Express, and forwarded it to the N. P. Pratt Laboratory, Atlanta, Ga., May 16th,

(Deposition of H. B. Pierce.)

1914. I received Plaintiff's Rebuttal Exhibit 124 via Southern Express, Oct. 24, 1914, and later forwarded it to Dr. Fuller at Washington, via Southern Express. I got it back to-day from Dr. Fuller. I received Plaintiff's Rebuttal Exhibit 135, Oct. 24, 1914, via Southern Express, and later sent it to Dr. Fuller at [1726] Washington, via Southern Express. I got it back to-day from Dr. Fuller. When I received all of these exhibits they were sealed and labeled. Upon each of them I placed an additional label, and then forwarded them to the chemists as stated, without having broken any of the seals or made any changes in the contents of the bottle whatsoever. In each instance when they were returned to me from the chemist, the seals were broken and in the same condition they are in now.

Cross-examination by Mr. LITTLETON.

Aside from the labels on these bottles I have no independent recollection of the time when they were received or shipped, other than the fact that they were received and shipped. These exhibits I have just referred to are the only samples I have shipped to any chemist in this case, so far as I know—there may have been others I do not recall. I do not recall sending any samples to any chemist other than to Dr. Fuller and to the Pratt Laboratory. I do not remember sending any sample in this case to Dr. Caspari at St. Louis. If I had sent any samples to Dr. Caspari, I believe I would have remembered it. I have not that I know of, sent any other samples



(Deposition of H. B. Pierce.)

procured for use in this case to any chemist that have not been produced. Yes, sir, I keep a record of all the bottles that come in, and of all the bottles that are sent to chemists. I could not say whether I have gotten back all the bottles that were sent to the chemists. I have not looked at my record to find out. Yes, a great number of other samples of syrups were obtained, aside from those put in evidence in this case. All those samples were sent to the chemists and [1727] and have not yet been put in evidence. A great many of those in evidence were not procured for use in this case. Ninety per cent of the samples now exhibited were not procured in this case—entirely brought about through the introduction of these people's testimony by the defendants. No, I have not thousands of samples of syrup stored away, but probably two or three hundred. I am constantly getting samples, every day. My men are constantly on the road procuring samples, when not engaged in other work, and those samples are constantly being sent to chemists for analysis, practically every week. I do not necessarily send them always to the same set of chemists. We have other chemists besides Dr. Fuller and this Dr. Heath of the Pratt Laboratory. Dr. Caspari and Dr. Wesener are the other two chemists. Yes, sir; I have sent samples of Coca-Cola, which I knew to be Coca-Cola, manufactured here in Atlanta to these chemists. I send such samples about once a month to each of these four chemists. These samples of Coca-Cola are sent to

(Deposition of H. B. Pierce.)

the various chemists so that they can keep fully informed of the product from month to month,—I believe that is the purpose. I could not tell you why it should be necessary that they should be kept fully informed from month to month. The samples that are sent to them are not always samples made here in Atlanta. They are sometimes made at the plants in Dallas, in Philadelphia, in Baltimore, in Chicago, in Havana, Cuba, and in Los Angeles, Calif., I believe. I believe those plants all make syrup but I do not know so. You ask if Merchandise No. 5, is sent [1728] separately to those places; I know absolutely nothing about Merchandise No. 5, nor what it is—nor any other number. You ask if I know whether any samples of Merchandise No. 5 are sent to chemists constantly or not; no, sir, I know absolutely nothing about it; I would not know it if it were. Yes, I have head of Merchandise No. 5.

Redirect Examination by Mr. HIRSCH.

Yes, since I have been up here connected with the Coca-Cola Company, I have been entirely in charge of the samples that the men send in off the road. I have received all of them, and sent all of them out. [1729]

(The following deposition was taken by Plaintiff as rebuttal testimony, on June 23d and 24th, 1915.)

**Deposition of Dr. H. B. Fuller, for Plaintiff (In  
Rebuttal).**

DR. H. B. FULLER.

Direct Examination by Mr. HIRSCH.

I reside in Washington, D. C. I am an analytical and consulting chemist. I am connected with the Institute of Industrial Research. I have been in the work I have described as a chemist for about fourteen years. I received my scientific education at the Worcester Polytechnic Institute which I attended four years. Since receiving my technical education, I was a chemist engaged in special work for Parke, Davis & Company for two years, subsequent to my graduation. Following that I worked for Mallin Kodt Chemical Works in New York, along chemical lines. Then I became engaged in special work of my own in Boston. For five years I was with the United States Government, Bureau of Chemistry, Department of Agriculture. For the last four years, nearly, I have been in private work for the Institute of Industrial Research. My duties with the United States Government with the Department of Agriculture were those of analytical chemist in the division of drugs, but my principal work there was investigating medical preparations, alkaloids and beverages. I did that work for about five years, and have been doing the same character of work in the Institute of Industrial Research, pretty steadily and constantly since then. I testified on behalf of the United States Government in



(Deposition of Dr. H. B. Fuller.)

the case of the Government against Forty Barrels and Twenty Kegs of Coca-Cola, and I qualified as an expert along the line above indicated in that case. I have qualified as an expert in other cases [1730] on behalf of the Government. I have known the drink, Coca-Cola, I should say, fifteen years, perhaps a little longer, but as long as that anyway. Yes, sir, I have made analytical examination of the product, Coca-Cola. You ask how many analytical examinations I have made thereof—do you mean beverages of that character, or Coca-Cola itself. You say you mean Coca-Cola; well, probably a hundred or two, I couldn't say positively,—at least two hundred, I should say. I have made in the neighborhood of fifteen hundred analytical examinations of other beverages of the kind and character of Coca-Cola. I have made a chemical examination of a preparation known by the name of Celery-Cola, and I testified in the case of the United States against J. T. Mayfield Manufacturing Company in Birmingham, Alabama. In my examinations of the product, Coca-Cola, I have never found any nux vomica or prune juice therein. I do not know of any specific test for prune juice, the only way one can tell it is by taste, taste is the only test I know of now. The predominating feature of flavor of Root Beer is oil of sassafras. I have never known of oil of sassafras in Coca-Cola. You ask if I have ever been employed by the Coca-Cola Company on specific cases to make specific analysis of syrup that was sent to me; not directly by the Coca-Cola Com-

(Deposition of Dr. H. B. Fuller.)

pany, but by Candler, Thomson & Hirsch, who I understand are the general counsel for the Coca-Cola Company. I received Plaintiff's Rebuttal Exhibits Nos. 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, by express with the seals intact and unbroken. Upon receipt thereof, I put special numbers of my own on each bottle. I placed my No. 132 on Exhibit No. 125; my number 133 on Exhibit [1731] 126; my number 5A on Exhibit 127; my number 6A on Exhibit 128; my number 191 on Exhibit 130; my number 181 on Exhibit 131; my number 182 on Exhibit 132; my number 8A on Exhibit 135; I also placed a number of mine on the other exhibits. I received each of these exhibits myself, broke the seals and opened the packages myself. I took the samples myself personally out of the packages and after first numbering them, I entered them in a record and then locked them up in my safe closet. I kept the key of the safe. From the time I received these samples until and including and during the time I made my analytical examinations, and after I made my analytical examinations of the syrup, no change was made of the syrup that was in those bottles. I submitted each of these samples to a chemical analysis. I determined that none of them was Coca-Cola, with the exception of Exhibit 134, which I determined to be Coca-Cola, and Exhibit 135 which I determined to be in part Coca-Cola—it was a mixture.

Cross-examination by Mr. LITTLETON.

I have been engaged in chemical analyses of al-

(Deposition of Dr. H. B. Fuller.)

kaloids and soft drinks for about nine years. I don't know whether I have been an expert all that time or not. Yes, sir; I qualified as an expert while I was with the Government, and I was qualified then to do this kind of work. You ask how often I got samples of Coca-Cola from the Coca-Cola Company to be analyzed; that is, samples of the products made by the Coca-Cola Company of Atlanta, Georgia; well, I don't know exactly, perhaps three or four times a year, I couldn't say absolutely. I only get one sample at a time. I have kept that up since I left the [1732] Government service. It has been nearly four years since I left the Government service. You say that would be about twelve samples of the product Coca-Cola from Atlanta, Georgia, that I have analyzed in that time; well, I don't know. You see some of the samples that are sent to me are Coca-Cola and it is rather indefinite. I have seen more than twelve samples. No, it is not a fact that the Coca-Cola Company sends me at stated intervals samples of their syrup from the factory here in Atlanta to be analyzed. I have testified in behalf of the Coca-Cola Company in other suits, I guess, about four times that I can think of right now. You ask if I am the regular chemical witness they call on to testify in regard to samples they get; well, they call on me, I don't know whether I am a regular one or not. I don't know how many times Dr. Capari has testified for them. I can think of three cases in which I have testified for the Coca-Cola Company, namely, I testified two times in the



(Deposition of Dr. H. B. Fuller.)

case of Coca-Cola Company against the Heinz Cigar Company, and once in the case of Coca-Cola Company against Mycrantz at Columbus, Ohio. The Coca-Cola Company or its attorneys or agents sends samples of syrup to me to be analyzed from time to time, but I wouldn't say constantly. The number of samples they send me a year to be analyzed varies. Sometimes they send me a couple of hundred, and sometimes not so many. Yes, sir; I said when I was with the Government I did work in alkaloids. I consider myself fairly qualified in that respect. The kinds of alkaloids that I worked with were cocaine, strychnine, quinine, alkalines, cinchona, nicotine, conine, pilocarpine, morphine, codeine, heroin, narcotine, and other opium alkaloids. [1733] And hydrastin, viburnum, viberin, and anhalorne—probably others. You ask how I happened to quit the service of the Government to go into the service of the Coca-Cola Company.

Mr. HIRSCH.—We object to that, the witness didn't say he was in the service of the Coca-Cola Company at all, but said he has been with the Institute of Industrial Research.

I am not in the employ of the Coca-Cola Company. I resigned from the Government to take a better position—that is the reason I resigned. At the Institute of Industrial Research, besides the work for the Coca-Cola Company, I do work on anything that comes in the way of commercial research work, analytical line of work in research. For instance, I take labels that are sent in by firms

(Deposition of Dr. H. B. Fuller.)

that make medicines, and go over them to see whether they comply with the food and drugs act, that in conjunction with the competition, by which I either analyze myself, or they are submitted to me—and I report as to their compliance with the law and what changes ought to be made in the formula, and the same in regard to insecticides—we handle a good deal of insecticide work and advise as to the proper declaration of the ingredients. Then I do a good deal of work in developing formulas for people who have things they want to make—usually, a man has a cosmetic say, or an ointment, a mercurial ointment, or cold cream he is not satisfied with, and thinks it can be improved; and I investigate that and see what can be put in it to improve it, in the light of the experience I have gotten in analyzing similar things. And then manufacturing problems come up in connection with making medicines, and to some extent food products, and those we take up as they come up, [1734] depending on what they are. And then occasionally I got toxicological cases—the investigation of stomachs and commodities used in attempting to poison people or animals, usually, which have been poisoned, and determine whether or not they have been poisoned, and the cause. In other words, it is a varied line. That is my work at the institute. The work of the institute itself covers quite a scope. One feature of it is the metallurgy of iron and steel, with which I have nothing to do. Another is the investigation of paints, in fact that is by far the largest investiga-

(Deposition of Dr. H. B. Fuller.)

tion that is carried on by this Institute is in the line of paints, and they have one entire department devoted to paint work. Another department is given up to mechanical engineers and getting up of plans, where people are starting in with new plants, we have a man there whose sole business is to plan machinery, and we employ draftsmen to work out the details, and we have a department which is given up exclusively to food work, with which I collaborate. They do a great deal of work on alcoholic problems. Then they have a road materials department, which takes up the investigations of cement, bitumen, and all materials they use in making roads, sidewalks and things of that kind. Those are the principal departments. I am what they call the drug department—drugs investigation. I am the head of the drug investigating department. I have assistants in that department, and of course, do not do all the work of the department myself. None of my assistants however, worked on these samples sent me by the Coca-Cola Company. I have not been [1735] at the head of that department all the time. When I went to the Institute it was confined food and drugs department, and I worked there perhaps a year and a half as they were combined, and then they split the department and gave me the drug end of it. But we yet have to collaborate with each other. No one collaborated with me in my investigation of these samples sent by the Coca-Cola Company. The Coca-Cola Company, or its attorneys secured my services about six months after



(Deposition of Dr. H. B. Fuller.)

I left the Government's employ. The way I happened to be employed in this kind of work by the Coca-Cola Company was that they sent me some samples to analyze. I had a conference with the attorneys and they arranged for me to do this kind of work. You ask if I have any idea why they employed me on this particular line of work; I think they are better qualified to answer that than I am, in that respect. I suppose they wanted me.

You asked me to explain in detail how I determined the syrup in Plaintiff's Rebuttal Exhibit No. 131 was not Coca-Cola; that particular sample was different from Coca-Cola in its percentage of caffeine, in its flavor and its reaction for merchandise number five. That is all I determined. Yes, I did determine its specific gravity. It was very close to Coca-Cola in that respect. The percentage of caffeine in this sample was .16. The reaction for merchandise No. 5 in this sample differed from the Coca-Cola test in that the color, reaction, and precipitate for tannin were entirely different from that gotten for tannin in merchandise No. 5. They differed in color and in their character. You ask why I say that this Exhibit 131 differs from Coca-Cola because [1736] it contains .16% caffeine compound; well, I arrived at the conclusion—I didn't take into consideration any one particular constituent, I took into consideration the entire result, and that feature of its low caffeine and different tannin reaction showed there was no Coca-Cola there at all, the flavor was entirely different, and it is unques-

(Deposition of Dr. H. B. Fuller.)

tionably not Coca-Cola. The caffein content of Coca-Cola is .20%. Of course, it may run in samples from .19% to .21%. I have never in my analyses of Coca-Cola syrup discovered a greater variation in its caffein content than from .19% to .21%. I have never discovered lower percentage of caffein in Coca-Cola syrup than .19% and have never discovered a greater percentage of caffein in Coca-Cola syrup than .21%. I am asked to explain in detail the method by which I determined the percentage of caffein content in Coca-Cola syrup manufactured by the Coca-Cola Company in Atlanta, Georgia; well, I took twenty-five cubic centimeters of syrup measured at the same temperature at which I took the specific gravity, which is twenty degrees centigrade, and introduced it into a separatory funnel. A separatory funnel is a piece of apparatus shaped something like a pear with a neck and bottom with a stopcock in it, the opening from the top, at which there is a glass stopper. It is well known in apparatus lore as a separatory funnel, and a separator. The object of this apparatus is that you can use it for separating liquids, for any alkaloid work you have to take out one substance from another by what we call the immiscible solvents, for instance chloroform and water don't mix, and by the use of an apparatus of this kind, you can put them together, manipulate [1737] them, and by shaking one solvent will draw certain ingredients from the other, then you can by this apparatus, open the stopcock at the bottom and draw out which liquid you want

(Deposition of Dr. H. B. Fuller.)

and then add more, and you still have your liquid on top. It is just an apparatus made for convenience. Now, I have got twenty-five cubic centimeters of syrup in my separatory funnel. I add excessive ammonia water. Fifty cubic centimeters of chloroform are then introduced and the stopper is inserted in the separatory funnel, and the contents are subjected to agitation, that is to say it is shaken for five or ten minutes, the object of that is to withdraw the caffeine from the syrup, leaving the sugar and other ingredients behind. Now, to be specific, that far I have put into the separatory funnel twenty-five cubic centimeters of syrup, then to that I have added five cubic centimeters of ammonia and fifty cubic centimeters of chloroform. You ask which one of those things, the ammonia or chloroform is the caffeine *is the caffeine* extracting agent; well, it is the chloroform. After agitating this mixture, as above stated, and after allowing the agitated mixture to stand sufficiently, the chloroform settles out, leaving a syrupy aqueous layer on top, and when there is no longer any further separation, the chloroform is drawn off into another separatory funnel and kept there for the time being. Then fifty cubic centimeters more of chloroform are introduced in the container, containing the syrupy liquid and that shaking process is repeated, then that is drawn off and the same thing gone through with until we get five cubic centimeters and a fraction of chloroform. Then those are combined, and the chloroform is distilled off, [1738] the residue



(Deposition of Dr. H. B. Fuller.)

which is left contains all of the caffein. That is then dissolved in dilute hydrochloric acid, 15 cubic centimeters being used—treated with twenty-five cubic centimeters of iodine solution,, which throws out the caffein in the form of periodide, and the flask allowed to stand for twenty-four hours. It is then filtered from the flask and the periodide remains behind on the floor. It is washed with an iodine solution two times and the periodide then decomposed with sulphurous acid and water, which permits the caffein to go into solution. This liquid is then filtered into a separatory funnel and neutralized with ammonia, and shaken out five times with chloroform similar to the method above described. The combined chloroform fractions are then run into a specially *pared* dish, the chloroform evaporated and the residue weighed, giving the total amount of the caffein in the samples contained I should say dried to 109 degrees centigrade to a constant head, and then weighed. When I put the twenty-five cubic centimeters of syrup in the separatory funnel and add the fifty cubic centimeters of chloroform to that, I put in five cubic centimeters of ammonia, in order to neutralize the phosphoric acid. The phosphoric acid has to be neutralized because caffein is a substance which, while not strictly speaking an alkaloid, is very close to the substance known as true alkaloid, and does to an extent form salts with acid. While caffein can be taken out from acid solutions with chloroform, it comes out with much less ease than from an alkaline solution, hence, the neutral-

(Deposition of Dr. H. B. Fuller.)

izing of the acids. Yes, sir, we have five separate shakings of this syrup with ammonia and chloroform. I put the five separate shakings [1739] all in one container—so that I have practically two hundred and fifty cubic centimeters of chloroform with that receptacle. In the separatory funnel where we first do the shaking, the chloroform goes to the bottom and the ammonia stays in the syrup. No, the chloroform does not make the caffein precipitate to the bottom, it does not precipitate, it dissolves it out of the syrup. You ask if it draws it, as it were, from the mixture into the syrup. It is diffused all through the chloroform, is not concentrated in one place. The chloroform does not extract anything else from the syrup besides caffein in the case of genuine Coca-Cola syrup, but in the case of any of these other products I have analyzed it sometimes does. Just what it draws out in addition depends on what is used in making these syrups. It is apparent that in some instances it draws out certain things from the flavor, that has happened in some instances—certain rosinous constituents, waxy substances of unknown determination. I have not gone into that to find out what they are. I determined that the chloroform extracted those parts or ingredients from the syrup by the fact that on subsequently dissolving the caffein in dilute hydrochloric acid, previous to precipitating with iodine, the substances remained undissolved, and furthermore from the fact that by weighing the residue, and then submitting it to the iodine precipitation,

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different results were obtained showing there was substances present which were not caffeine. I never analyzed those substances to determine what they were. You ask how I know, then, that these substances are not in Coca-Cola; because I am able to get practically the same results by weighing the chloroform residue, the amount of chloroform and residue—and also by submitting it to this [1740] iodine purification; that is, may get the same results whether you do it one way or the other, practically showing there is nothing appreciable withdrawn. I said the kind of substance that sometimes comes out with the chloroform is resinous and waxy substance. You ask if anything else besides that comes out; why, I have never determined, I don't know really what does, what it is, just has that general appearance. It was something I was not interested in, so I have not gone any further with it. Its color was brown, sometimes white. No, it was not in crystals. It was a hermorphorous material, that is to say, noncrystalline. No, it is not a liquid. It is, for instance, a substance like beeswax. No, I did not smell it to see what it smelled like, or did I taste, nor did I determine just what it was. The only thing I noticed about it at all was the appearance—its color, and the character of the substance, that is whether it was liquid or not. No, I did not feel it to see whether it was soft or hard. How did I know it was wax? I don't know that it was wax; I simply say it was of a waxy and resinous appearance, and I didn't determine anything more about



(Deposition of Dr. H. B. Fuller.)

it, because I wasn't interested in it. I don't remember whether I got anything like that from Exhibit No. 113. I don't remember whether I got anything like that from any of these exhibits that I have asked about. I did not make a test of that sort to ascertain whether or not the substance would come out with the chloroform in any of these exhibits. That substance I have been talking about is the only thing that chloroform takes out in addition to the caffeine. This is a rosinous, waxy substance which comes out with the chloroform, and would [1741] have any effect whatever on the power of the chloroform to extract the caffeine. The chloroform would extract the caffeine absolutely the same—same quantity of caffeine when it extracts that waxy, resinous substance as it does when it does not extract that. And there is no chance for the caffeine which is extracted by the chloroform to be either increased or decreased by reason of the extraction also of this waxy, rosinous substance. In other words, the first shaking of chloroform and ammonia with this syrup would get out exactly the same quantity of caffeine when the waxy, rosinous substance was not extracted by chloroform as was when the rosinous waxy substance was not extracted in the chloroform. The caffeine would be there, but of course, you understand if you want to weigh that waxy residue in there, you would get a higher percentage of caffeine with the result. That is why I put it through the iodine purification—to eliminate those substances—but the amount of caffeine in there would come out of the

(Deposition of Dr. H. B. Fuller.)

evaporation or what else was in there, it would all come out just the same. This waxy, rosinous substance has absolutely no effect whatever upon the caffeine in solution with chloroform. I know that because the chloroform which removes the caffeine from the solution under those conditions always absolutely—does not make any difference whether there is anything else in there or not. It may bring that along, too, but it will get all the caffeine. There is no effect with this rosinous substance, upon the caffeine with solution of chloroform. It is an inert material which does not dissolve in water, and you can get the same amount of caffeine whether it is there or not, by the same process. It has no capacity [1742] to absorb any of the caffeine, nor has it any capacity to dissolve with the caffeine and increase its weight. Now, after this chloroform solvent containing the caffeine—that is these five shakings of chloroform with the syrup—are put into this container, immediately after that the chloroform is distilled off, and the chloroform solution is then in what we call a distilling flask which holds about 500 cubic centimeters. Heat is applied and the chloroform goes off in the form of vapor, up through a little tube that is inserted in the neck of the flask through a condensing worm surrounded with cold water, the chloroform contained in that bottle and that is continued until the chloroform is entirely driven off. The heat is applied by the ordinary Bunson furnace, and it takes perhaps fifteen minutes, I never timed it, for the chloroform to be driven off.

(Deposition of Dr. H. B. Fuller.)

I determined that all of the chloroform is driven off by looking at it, and also by smelling it. If there is any chloroform left you can tell it. You simply take off the top of the flask when the chloroform is driven off, simply remove it and take out the neck, the stopper contains a little tube—and you can smell it, or look at it if it is dry and there is no odor of chloroform, the chloroform is gone. There will not be any chloroform odor sticking to the sides of it, the chloroform is in very small quantities. Now, after the chloroform is driven off, the only thing that is left in that glass is caffein, and these impurities I speak of, in case they are present in the syrup. The caffein left is in the form of white crystals; I don't remember what the weight of the caffein is that is left there after this 250 cubic centimeters of chloroform solution is driven off. No, sir, the caffein content of Coca-Cola syrup [1743] does not vary. I do not know what the weight of the caffein that is extracted from twenty-five cubic centimeters of Coca-Cola syrup is. Yes, sir, it is not weighed at that point, because it is inconvenient in the receptacle it is in. I could dissolve it out in a little chloroform if I wanted it at that particular point, but as I explained, I add a little acid and precipitate that iodine solution. I don't turn it up a little and drop it out because it is stuck to the bottom of the flask. You couldn't get it all out that way, it wouldn't be a chemical analytical possibility to get it all out, and that is why I add all these other ingredients to it, to get it out of the flask and purify



(Deposition of Dr. H. B. Fuller.)

it. Of course, that is the general process with straight Coca-Cola. You can dissolve it out with the chloroform into a small dish containing about one hundred cubic centimeters and evaporate the chloroform away. Now, after driving off the chloroform, I then add more chloroform to it, and go through the process again and then just pour it out in a dish again and let it evaporate. You could take this 250 cubic centimeters of chloroform solution, pour it in a flat receptacle and evaporate the chloroform out, but for economical purposes, if you are running a good many samples, it is well to recover your solvent and use it over again—that is just for convenience. I add twenty-five cubic centimeters of chloroform to get all the caffein out of the flask. That takes all the chloroform out. You ask why, then, it is necessary to add two hundred and fifty cubic centimeters of chloroform to the syrup to get the caffein out of that; well, that is a law of physical chemistry that it is a little difficult to explain, but it is a fact [1744] when your caffein is dissolved in a liquid you cannot get it all out with twenty-five cubic centimeters of chloroform. It will not all come out at one extraction. Probably by your first fifty cubic centimeters you get ninety per cent of your chloroform, probably by the next one you get out half of what is left, and by the time you get your third fifty cubic centimeters thoroughly shaken out, you have got almost all. But I always put in two more for good measure. I don't know how much caffein fifty cubic centimeters of chloroform will

(Deposition of Dr. H. B. Fuller.)

hold. No, twenty-five cubic centimeters of chloroform would not do the extraction as well as fifty cubic centimeters at a shaking, for this reason; that you have twenty-five cubic centimeters, and it will form an emulsion, which is difficult to separate, so for convenience we have adopted the use of fifty cubic centimeters. An emulsion is a very troublesome mixture of two liquids which are difficult to separate; that is, if you have got chloroform and an aqueous liquid in proper proportions and shake them, you get a milky looking mixture which is very slow in separating—that is the aqueous liquid is slow in separating out on top, and the chloroform in coming out below. That is what we call an emulsion. In other words, it takes twice as much chloroform in volume as there is syrup in order to make the chloroform go to the bottom of Coca-Cola syrup, the chloroform is heavier than the syrup. You ask why I add twenty-five cubic centimeters of chloroform to this caffen crystals in the bottom of the flask, and you ask why I couldn't add, say ten cubic centimeters of chloroform. As a matter of fact that is what I do in the first place, but I add twenty-five cubic centimeters of chloroform altogether [1745] for this reason: The first ten cubic centimeters will dissolve the caffen and you pour that out, but there is always a little of the chloroform solution which remains adhering to the sides of the flask, and which won't pour out. It is like any liquid in a container, you can pour out practically all of it, but there is a little left, and of course that which is left contains a

(Deposition of Dr. H. B. Fuller.)

little caffen dissolved in it, and will not evaporate—it leaves the caffen behind when it evaporates, so you can see it there—you don't get it all out, so by adding another ten cubic centimeters and shaking it around in there you can wash that all out, and then five more cubic centimeters for good measure to get it all out, and then you add—perhaps half a cubic centimeter less, and then your flask is perfectly clear. It is just a mechanical convenience. Now, I take these twenty-five cubic centimeters of chloroform which at this time contains nothing but caffen and put them in a pan-like receptacle and let it evaporate, and then that leaves the caffen crystals again in crystalized form. I then dry the caffen crystals at 100 degrees centigrade first, and that drives off all of the remaining chloroform that might be left. In drying the caffen crystals, I put them in a little oven that is heated to a convenient temperature and which maintains the same uniform temperature. Now, after heating and driving off the residue of the chloroform, the caffen crystals still adhere to the receptacle. Just as they did in the flask. But we weigh them then in that receptacle. A less amount of heat than 100 degrees centigrade would drive off the chloroform just as well, but we have a constant temperature oven in our laboratory [1746] running all the time at 100 degrees centigrade, and there is no reason why we should not use that, and then if there is any moisture which might possibly have adhered to the chloroform gotten into the flask, and perhaps been taken up and then that is driven off—it is just provided for that



(Deposition of Dr. H. B. Fuller.)

contingency in analytical work. We have provided for a lot of analytical work that don't always happen, but we have to provide for them just the same. This heat of 100 degrees centigrade is applied to this mixture of chloroform and caffenin for about an hour. We then take the caffenin out and let it cool in a desiccator. When the caffenin is in the oven it is on a little tray. The heating of the caffenin of subjecting it to this 100 degrees heat for an hour has no effect whatever on the caffenin. The hard crystals stick to the bottom of the tray. I don't know why they stick, but that is just a property of caffenin. You can tape it off, but in doing so it will break. You ask if you just take caffenin crystals and set them down on a tray or pan, if they would stick to it; well, that is very doubtful. You say that then the heat has an effect on the crystals to make them stick to the tray. Well, I don't know, I wouldn't say that it would, they don't ordinarily stick to whatever you put them on to, not when you take them in the crystalline form and put them on something; as you just remember you are recovering these from a solution and when you recover a thing from a solution and when you take it out in a dry state and put it on something, you have very different conditions and in one case, you will always have something sticking to the container, and the others you won't—unless of course *it* [1747] *wet*. You ask what is the form of the caffenin when it is in this chloroform solution; and you say, of course, it is not a crystalline form, then; I don't know what you would

(Deposition of Dr. H. B. Fuller.)

say about that, you cannot tell that, of course,—just from its solution. I don't know whether or not the process of crystallization of the caffein causes it to adhere to the tray on which it is evaporated. I then take that little tray out of the oven which now contains nothing but caffein crystals and weigh that. I previously weighed the tray on which the caffein is placed. I said a special pated container, pated means that it has been previously weighed. In weighing this we use what we call an analytical balance, sensitive to a tenth of a milligram. It is a very carefully balanced apparatus which oscillates on a knife edge. It has a beam running across and the caffein is put on one side and the weights on the other. When the caffein is being weighed it is placed in a glass beaker, and that is what the caffein is in when it is placed in the oven. Of course, the glass is heated to 100 degrees centigrade also when it is in the oven, but that heat wouldn't have any effect on the glass. No, the heat of the glass would not tend to heat the caffein to a greater degree of heat than 100 degrees centigrade. Now, that is as far as I go in the process of determining the caffein in Coca-Cola syrup, and the caffein in Coca-Cola syrup is never less than .19% and never greater than .21%. I mean by that nineteen-hundredths per cent and twenty-one-hundredths per cent of caffein. I don't mean how many grains of caffein .19% of 1% would be, because I don't know what the weight in the residue—you see I give the weight and figures percentages, I don't [1748] know what those weights are. They are deter-

(Deposition of Dr. H. B. Fuller.)

mined in milograms, but just what that is I don't know. I cannot tell you the actual weight of any of the caffeine that I have extracted from any of the samples, either the Coca-Cola syrup or any of these exhibits I have analyzed. You ask me to tell you how I transposed the weights into percentage. Well, I know that I take twenty-five cubic centimeters of my syrup and I have my specific gravity taken at the same temperature that I measure my test. Hence, by multiplying the volume by the specific gravity and dividing the weight of the caffeine by that, and pointing off the proper number of decimal places, you get the percentage. No, I did not weigh the twenty cubic centimeters of syrup, either before extracting the caffeine or afterwards. I measured it—measured it before I began the analysis to determine that it was twenty-five cubic centimeters. I did determine, however, the specific gravity of this twenty-five cubic centimeters of Coca-Cola syrup before extracting the caffeine. The specific gravity is determined by an apparatus called the pycnometer. This is a flask fitted with a thermometer, and in it is introduced the syrup which has been adjusted approximately to the temperature at which the specific gravity is taken. Now, the specific gravity of course varies, depending upon the temperature. The temperature of the syrup is then brought up in the pycnometer, or brought down, whichever the case may be, to the temperature at which it is desired to take the specific gravity, which in all instances was twenty degrees centigrade. The whole apparatus, including the



(Deposition of Dr. H. B. Fuller.)

syrup, was then allowed to go the temperature of the room, and weighed. Previous to that, of course, the weight of the pycnometer had been determined, and by subtracting the weight [1749] of the pycnometer from the combined weight of the pycnometer and the syrup, the weight of that volume of syrup at that temperature is obtained. Then I weigh pure distilled on this same pycnometer, at that temperature, twenty degrees centigrade—determined by the same method. By dividing the weight of the syrup by the weight of the water you get the specific gravity. I heat the syrup first to twenty degrees centigrade and then let it cool to the temperature of the room, for this reason: the scale or balance of course will vary in different seasons of the year, according to the temperature obtained at that particular time, and the sensitiveness of the balance would depend upon the temperature, and if you try to weigh something that has a different temperature from the balances, you cannot get a satisfactory weight, it will oscillate more or less, and you cannot get constant figures. You cannot get an absolute accurate balance—simply a physical phenomenon, that is all. In other words, you have your pycnometer and syrup at the same temperature at the time of weighing, and the same results will obtain, and you can determine the same as to its specific gravity if the syrup and pycnometer were both at 100 degrees centigrade, or both at 1 degree centigrade each, provided you weigh your water at the same temperature. Your water must also be at the same tempera-

(Deposition of Dr. H. B. Fuller.)

ture. It makes no difference what the temperature is so long as all three of those are at the same temperature. Of course, what I have done here was to adjust everything at twenty degrees, because that is normal average temperature of our climate. At the time I did the weighing the syrup was probably not at twenty degrees centigrade. That, however, has no effect on the volume because the [1750] pycnometer is so arranged that any increase or decrease in volume is kept right there in the pycnometer, that is, if the temperature rises and the liquid expands a little bit, there is a little overflow chamber to the neck of the pycnometer which takes care of it, and of course if it is cooler and contracts it goes down in the pycnometer a little further, that is all. Of course, you could take the pycnometer and the water and the syrup in the temperature of the room and simply weigh them that way without treating any one of them, if you wanted to, but we are after concordant results, in our analytical work, so we always adjust to a definite standard. I said the temperature does not make any difference after you have adjusted it to twenty degrees centigrade. After you get it in there and adjust it to twenty degrees in volume, I should say the volume at twenty degrees—then it does not make any difference what the temperature is, when you make the weighing finally. In this connection I determined the specific gravity of Coca-Cola syrup to run from 1.253 to—I will have to refresh my memory a little on that—1.263. The reason for that difference is this, when the syrup is

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fresh made, the sugar is in the form of sucrose, but on standing in acid solution, hydrolysis takes place—that is, a molecule of sucrose is converted into its chemical constituent, you might call them, and a molecule of water is added to it, giving you one molecule of dextrose, and one of levulose, or what is known as invert sugar. That one molecule of water which is taken up by the sugar produces a slight contraction in the volume of the whole commodity and thereby raises the specific gravity. That is why I say the specific gravity [1751] varies from 1.253 to 1.263, something like that. 1.263 is the highest specific gravity, that means it is heavier than 1.253. When the syrup is fresh it is a lower specific gravity than when it has stood for some time. After it stands the sugar undergoes this process and absorbs this water and makes it heavier. I have not determined the minimum time it takes to increase the specific gravity of fresh syrup from 1.253 to 1.263, but probably it would reach that in a month or two—I know you could in three months. I don't know definitely whether you could get it in less time than that or not—you wouldn't get it in a day or two, I know that—you might get it in two weeks, but ordinarily it is a slow process. I don't know how many samples of Coca-Cola that has been fresh made I have ever analyzed, I couldn't say. You ask if I have analyzed as many as 100. I don't know that I could say that. You ask if I have analyzed any samples of Coca-Cola syrup that has been freshly made. Yes, sir, I



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have analyzed those in my own laboratory in the last three or four years, that is about as near as I could say. I knew it was fresh made, because it had been sent me from the—no, not the factory—well, I won't say no, because I have had a few, mostly from Baltimore. The only way I had of knowing it was fresh made was from what somebody told me. That part of my testimony and my analyses thereof was based absolutely on hearsay testimony. I have never taken any syrup that has just been made out of the vat where it was made and analyzed it. I have never taken any Coca-Cola syrup which I myself saw made by the Coca-Cola Company and analyzed it. The only way I know that the Coca-Cola syrup [1752] which I have analyzed was Coca-Cola syrup, was from what somebody told me. I don't know how many samples of Coca-Cola syrup I have analyzed as to specific gravity and caffen content, before I reached the conclusion that Coca-Cola syrup did not vary in those two respects beyond my figures which I have given. I came to that conclusion some time in the course of the investigation, but just the precise point, I don't know, I couldn't say. I don't know, I am sure, whether it was before or after I had begun doing work for the Coca-Cola Company. I wouldn't want to answer that, because I don't know. Yes, sir; I have discussed the method of getting the caffen content from this character of syrup and getting the specific gravity of this character of syrup with Dr. Capari of St. Louis. I do not think I dis-

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cussed the method with him prior to the time I arrived at the conclusion that Coca-Cola syrup is practically uniform in those respects, did not vary any more than the figures I have given. I am measurably certain of that, I don't think Capari and I ever discussed the method until last winter, but I came to the conclusion, I know, before that. I had always pursued the same course prior to that time in determining its specific gravity and caffenin content. This method which I have pursued, has been each time carefully and painstakingly pursued as I have outlined in my deposition. I don't remember ever to have found in any of the analyses I have ever made of Coca-Cola syrup at any time that its specific gravity was less than 1.253. I keep a record of all analyses of Coca-Cola syrup that I make, and I have them at various places, but I have none of them with me here, except as to [1753] the specific exhibits in this case. I don't remember ever to have found the specific gravity of Coca-Cola syrup to have been greater than 1.263 in any of the analyses of that syrup I have ever made—that is, Coca-Cola fountain syrup. Of course, in the fourth place there may have been some little variation, but I don't remember. After you get beyond the second and third place, the variation in figures does not mean very much, because there is always a personal equation which may be the cause of some little error creeping in. A variation of one unit in the second decimal place would be a material variation of the specific

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gravity of syrup of this character beyond the limit I gave—it is not in this case. A variation between 1.253 and 1.263 is not a material variation in the specific gravity of the syrup. It would be a material variation if one analyses determined the specific gravity of the syrup to be 1.243 and another 1.263. The difference of two points in the second decimal place would be of material variation in a place like that. Anything below 1.25 or anything above 1.26 would be a material variation. If the specific gravity of one sample of syrup was 1.250 and of another 1.263, the variation between the two samples would not be very material. You ask if it would be material or immaterial; I am not quite clear in my mind as to the meaning of the term “material” there; as I explained the lowest specific gravity might be due to the presence of inert sugar and higher due to the fact that it had been converted and in that change there is no material difference. If on the other hand, the 1.250 was the final specific gravity, there would be a material difference. Now, suppose a sample [1754] of fresh syrup had a specific gravity of 1.240, the specific gravity of another sample of syrup which was a month or two old had a specific gravity of 1.253; I think that would be a material variation in the specific gravity, and I don’t quite think you could quite get that difference if you had a 1.240 for your original. I don’t see how it could go up to 1.26, with my experience with syrups. If one sample of syrup analyses shows a



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specific gravity of 1.240 and another sample shows 1.263, then my conclusions from that fact based on my own experience would be that the two samples were not made in the same manner. I cannot conceive that there could *possibly any* mistake about that. In all my analyses of Coca-Cola syrup during the nine years I have been analyzing this syrup, I don't remember, ever at any time, to have ascertained the specific gravity of Coca-Cola syrup to be less than 1.253 and if I had ascertained it to be less than that I think I would have remembered it. You ask if I had found it to be less than 1.253, and if there was in fact a variation in the specific gravity of genuine Coca-Cola syrup from 1.240 up to 1.263, would my conclusion still be that Coca-Cola syrup was practically uniform as to specific gravity and that there was no material variation in the syrup as to its specific gravity; well, I know that I never found Coca-Cola down to 1.240—I can answer that I never have found one as low as that. You ask what is the lowest I have ever found it. Well, I say I don't remember ever finding anything below 1.25; in fact I am quite sure I never have. You ask if I have ever found it as low as 1.227; I don't remember, I don't think I have ever found it as low as 1.241. You ask if I had [1755] found it as low as that would I say then that Coca-Cola syrup was practically uniform as to specific gravity and has no material variation as to its specific gravity; well, I should say that was more variation than there could be for a constant syrup—1.24

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to 1.26 is quite a variation. I could not say that the syrup was uniformly the same as to specific gravity if it had that variation. You ask if I would say that such variation was a material variation as to its specific gravity; well, you are getting pretty close to a material variation—I don't know whether I would say it was material or not. You ask if I could form any reasonable rational conclusion at all from the specific gravity of a syrup that varied to that extent in its specific gravity; and another syrup with which it was compared, as to which was which; I couldn't say—I wouldn't form any conclusion from the specific gravity alone. You ask if that variation in the specific gravity would be one indication to my mind that the two syrups were not made the same way; well, I won't admit that there is any such variation as that in Coca-Cola, I won't admit that it ever goes to 1.24. You ask if I would admit it ever goes to 1.24, if anything in the third decimal place as 1.241 to 1.249; well, that nine you see, there you are getting pretty close to 1.25; even 1.25 is pretty low, and I wouldn't, as a chemist, ever form any conclusions from the specific gravity alone. Well, it is one of the tests, yes, sir. I could not base a rational conclusion from one form of a test on a syrup that varied in specific gravity from 1.241 to 1.246. You say suppose I made a syrup always according to the same formula and I discovered [1756] that one batch of the syrup—I couldn't state how old it was, was 1.24—something, and another batch of the syrup

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without knowing how old it was—was 1.25—something, suppose I discovered these were two samples which I didn't know where they came from, whether out of the same container or not, or how old they were; and you ask what conclusion I would form from that fact; well, if I had two samples one testing 1.24 and the other 1.26, I would say that they were not from the same batch, in the first place, not the same product; and I should ordinarily conclude that one had more sugar than the other one did. Aside from the change in the chemical process of the sugar after a batch of syrup has been made and allowed to stand, the difference in the composition—the sugar content—would add to or detract from the specific gravity of a syrup of this character. Assuming that the general composition was the same, the difference in any of the other components should not add to or detract from the specific gravity. If a little more water was added to one than to the other, that, of course, would make less sugar. If one sample had more of the phosphoric acid than the other, that would affect the specific gravity very little; if there was a material amount it might affect it slightly, but a very little. A variation of the caffeine content would have practically no effect on the specific gravity on the amount that are used in these beverages. The sugar content of the syrup is practically the only thing that can affect the specific gravity of the syrup of this character. No, the temperature to which the syrup may have been subjected



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would not affect its specific gravity. I mean to say that if a batch of syrup of this [1757] character was treated, say to 100 degrees centigrade for an hour, I do not think its specific gravity would be changed. Heating syrup of this character to that degree of heat for that length of time would tend to increase the rapidity of hydrolysis and of course, if it was open to the air, the water would evaporate, and then you would have more sugar to the solution, that would affect the specific gravity. I cannot concede that the addition of simple syrup to Coca-Cola syrup would affect the specific gravity in any way *would affect the specific gravity in any way*. Simple syrup is a mixture of sugar and water, about fifty per cent each. You ask if the addition of fifty per cent more of syrup to a batch of syrup of this character would not affect the specific gravity one way or the other; of course, if you add fifty per cent of sugar it would increase it very much, but if you add fifty per cent of simple syrup it would not change it very much. You say sugar loses about 53 to 53½ to 54 per cent, and adding fifty per cent sugar if that does not add the relative amount of sugar in the material also; yes, sir, it is very easy to determine whether or not the product is Coca-Cola syrup as it comes from the fountain, and whether or not it is Coca-Cola syrup to which simple syrup has been added. The caffen content and the phosphorous content would show up that condition right away. It would immediately lower both of them. You ask how much

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variation it would produce if I diluted a gallon of Coca-Cola syrup with from a half a gallon to a gallon of simple syrup; well, if you added a gallon to a gallon you would get just half as much caffein and half as much phosphoric acid to your finished [1758] product; if you added half a gallon the reduction would be about a third. Then of course, it would probably change the flavor somewhat, making the flavor flat, I should say, and reduce the intensity of your reaction for tannin, very likely it would lead to—I am not sure about that—it might tend to produce a product which in the end might ferment, and be likely to explode. The addition of this simple syrup would reduce the percentage of caffein and percentage of phosphoric acid, and although it would not destroy the tannin reaction, it would render it less intense so that it would be harder to discover it on a test. If a container had previously contained other syrup similar to Coca-Cola, and the Coca-Cola syrup were put into the container it not having been washed out in the meantime, the effect of the residue of the other syrup on the Coca-Cola syrup would depend on how much was left; if there was an appreciable amount, you could easily determine that it was an admixture, very likely. The sample of the syrup when analyzed would very likely vary from genuine Coca-Cola syrup in the respects I have indicated, so far as my examination. If Coca-Cola syrup were exposed to the air, evaporation would take place, and that would tend to change the analysis of the syrup

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after the evaporation had taken place, but of course, the change in the specific gravity of the syrup would necessarily affect all the other tests, caffenin, phosphoric acid, merchandise, sugar and all that—it wouldn't affect merchandise No. 5 very much, because condensation is very slow. In all the analyses I have ever made of Coca-Cola syrup, I have never found the caffenin content in Coca-Cola [1759] syrup as low as .16% in the fountain syrup. I am positive of that and could not be mistaken about it. I have made the analyses also of bottlers syrup and I think the lowest I ever found in that was an old analysis I made before the method was fully perfected; that come out .17%, but as to that I am not positive. I wouldn't want to go on record as saying that absolutely. I don't remember of ever finding in any of my analyses that Coca-Cola syrup, either the fountain syrup or bottlers syrup, that the caffenin content thereof was as low as .15%. I don't remember what is the lowest I have ever found the specific gravity of bottlers coca-cola syrup to be. I have done very little work on the bottlers syrup; most of my work has been on the fountain syrup. I think I analyzed bottlers syrup when I was working for the Government. I don't know it was bottlers syrup of my own knowledge; I just know that from hearsay. I also analyzed fountain syrup when I was with the Government. I couldn't say how much bottlers syrup I analyzed when I was with the Government because the samples were presented to me



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from different sources, and I did not ascertain, or I was not informed about it, so I couldn't say. Yes, sir, the methods I have given you to determine the caffeine content of Coca-Cola syrup was the method employed by me with respect to the fountain syrup. I pursued the same process as to the bottlers syrup and the specific gravity of both kinds of syrup was taken in the same manner, absolutely. I have also tried to determine the specific gravity of Coca-Cola syrup by the Westphall balance, but my results were not very satisfactory. I don't remember now what the variation was I [1760] noticed in the result. I don't like the Westphall balance as a method of determining it, so I may have been prejudiced. I gave it up long ago, and always used the pycnometer. I don't know what per cent of caffeine 1.92 grains per ounce would be. I suppose I could figure it out. Yes, sir, I will do so. (Calculating.) .17%. You ask if it is not a fact that it is about .15%; well, I may have made a mistake. You ask me to go over it again carefully and see if it is not .15%; (after making calculation) it is .166%. 1.02 grains per ounce would be .18% caffeine. Yes, sir, I am certain it is .18 and not .17. 1.19 grains per ounce would be .21% of caffeine. You ask now to explain in detail how I transposed the grains per ounce to per cent; well, I divide the grains per ounce by 15.43 which is the number of grains in a dramme, then I take the specific gravity, 1.253, multiply it by 29, the number of cubic centimeters in a fluid ounce, and I divide the first remainder by the latter, which gives

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the percentage. What I am doing is simply to convert your figures into the metric system, with which I am familiar. I get the number of drammae according to the number of grains you gave and then divide that by the weight of ounces in the syrup in grams, which gave me the percentage. You ask if, supposing I had .92 grains per ounce, and it figured out that it was .15% caffeine, and I should figure the specific gravity of the syrup with that result; I guess I will have to think that over; I have gotten balled up in my arithmetic and cannot think. I will have to do it some time when I am not hurried about it. It will be more than the specific gravity you have, but I cannot figure it out how I get at it, that [1761] is all. I don't remember what the lowest specific gravity of bottlers coca-cola syrup was that I ever determined. I do not think it was ever as low as 1.240; I do not think it was ever as low as 1.247. I don't remember anything about bottlers syrup except that it had a higher specific gravity than fountain syrup. You ask if I ever ascertained fountain coca-cola syrup to have as high a specific gravity as 1.288. That I don't know in fact, I couldn't say offhand. I should say it was round about that though, that is about my remembrance of it. Yes, sir, that is right, that is fountain Coca-Cola syrup I am speaking about, it was more than 1.266, but whether it is as high as 1.288, I don't remember. No, I have never ascertained bottlers Coca-Cola syrup to be as high as 1.288. I should think it pretty likely

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that I have ascertained the specific gravity of fountain syrup to be as high as 1.2518. I think I have reported the caffeine content of fountain Coca-Cola syrup to be as low as .17%. I don't remember ever reporting the caffeine content of Coca-Cola syrup to be as low as .16% in a sample that I knew was genuine. Yes, sir, I have found and reported bottlers coca-cola syrup to have as low as .15% caffeine content. I think I found that figure when I was working up the Government cases. Of course, at that time the method I was using was different from the methods I am using now, and the figures there were probably low—in fact I know they were low. Yes, sir, I did tell you in the early part of my examination that I had ascertained the caffeine content of coca-cola syrup by the same methods for the past nine years—measurably the same; of course, those early tests were made for the Government, [1762] and were made by methods which varied a little, but not in essential details. No, the methods I pursued when with the Government would not have permitted of the variation from .15 to .21 per cent in the same syrup, or with the same class of syrup, whether it was bottlers or fountain syrup. I do not think there could be a variation between bottlers coca-cola syrup and fountain coca-cola syrup of .15 to .21 per cent for the caffeine content. You ask if there could be a variation of between .15 to .19 or .20 per cent; bottlers syrup does not run over .17 per cent and fountain syrup does not run below .19 per cent. You ask if I have ever found fountain syrup as low as .17



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per cent; only in that case I spoke of, when we were working up the cases against the Forty Barrels, and as I said the methods then were comparatively new and the variation was due to the non-removal of all the caffein. Those determinations were checked up by another chemist who found slightly higher results, but that was attributable to the difference in the methods pursued at that time. The other chemist I have reference to was Dr. Emory who was a Government chemist also. No, he was not present when I performed the experiments. In determining the specific gravity I have always used the pycnometer. I have always used it properly and carefully on all occasions, and it always yields correct results. Yes, sir, it would be a material variation in the caffein content of a syrup of this character for one batch to be .92 grains per ounce and another batch 1.02 grains per ounce, and still another 1.19 grains per ounce, and the variation would be material whether it was fountain syrup or bottlers syrup. You ask if it would not [1763] be pretty hard to reach a conclusion from such a variation if there was that much variation in different samples of the same make or brand of syrup; not at all, because I happen to know what figures those are you are using, and I know the circumstances under which they were obtained, as I have come to know it does not vary, though the bottlers syrup which is the low one there, is an entirely different proposition; and while that difference in the test of caffein content from the

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fountain syrup, as far as I have ever investigated it, it does not vary in itself. No, a variation between 1.02 grains per ounce and 1.19 grains per ounce is not much of a variation. I think I figured that it would be a difference in per cent of .18 and .21 for the fountain syrup. I said .92 grains would be .166% and 1.02 grains per ounce would be .18, and 1.19 grains per ounce would be .21. Yes, sir, a variation of .17 and .21 per cent would be a material variation in the caffen content, I should say so. Of these two syrups I should say the .17 would be bottlers syrup and the .21 would be fountain syrup. You ask if I recall if the syrup with caffen content was .17 was actually bottlers syrup when I made the analyses for the Government. I know the low one was the bottlers syrup, but I don't remember the exact percentage I found. You say that there are two low ones here, .92 and 1.02 grains per ounce, and you ask which of those was bottlers syrup. I think the .92 was the only sample of bottlers syrup, and .18 and .21 per cent was the fountain syrup. But bear in mind now, those figures are not necessarily correct.

[1764]

Now, we have not quite finished that original process with the caffen and these 25 cc. of syrup that we were first talking about. We stopped at the point where I had evaporated all the chloroform from the caffen in this oven at 100° centigrade, and had then weighed the residue caffen. That is as far as I go in determining the caffen content of Coca-Cola

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syrup, but with these samples of syrup other than Coca-Cola, I go further. From that point on with these other syrups I do not weigh the caffein at that point, but I pursue a subsequent process, because I want to provide for any impurities which might come out at that point with the caffein—the waxy resinous substances; at that point the caffein is then dissolved in 15 cc. of hydrochloric acid and precipitated with iodine. I precipitate it with iodine because iodine will throw out the caffein completely as periodide and leave anything else in solution. No, I could not use the iodine with the syrup originally and get the caffein out. I cannot say why. You ask if the caffein is the only thing in the syrup that would combine with the iodine and the hydrochloric acid; when you have a syrup mixture like that it is very difficult to produce a complete precipitation—these sugars and other things hold up the periodide and it does not come out. Caffein combines with iodine very freely when it is in fairly concentrated solution by itself; when it is in a mixture, it does not precipitate—then there may be other things in there that may not precipitate; by this process we get the caffein in as pure a form as we can, in the easiest way. Now, I treat this residue, we will call it, of caffein [1765] and foreign substances—this waxy, resinous substance, with 15 cc. of Hydrochloric acid and 25 cc. of iodine solution. The iodine solution is made in proportion of ten grammes of iodine, twenty grammes of potassium iodide and 100 cc. of water. The hydrochloric acid dissolves the caffein more easily than water



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alone, and aids the precipitation of the periodide; just what function it produces nobody knows. That is all it does. You could not get the same results by adding the iodine solution to the caffein in the flask, because you would get the caffein and the waxy resinous substance precipitated out together, and what you want to do is to get them separated. By dissolving in acid you leave a good deal of the wax behind, and when you precipitate with the iodine you get it out in pure form away from anything that might be dissolved. The hydrochloric acid helps to separate it to some extent from the wax and to bring it into solution easier than water would. You ask if hydrochloric acid prevents the wax from going into solution with the iodine solution; it does not dissolve. No, it would not dissolve in the iodine solution, but for the hydrochloric acid—it would not dissolve in water if you used water alone. You ask why I use hydrochloric acid if the wax does not dissolve with the iodine solution, and you ask why would not the iodine take the caffein out just the same; it just does not—lots of things we don't know why it does not, we simply know it does not. The wax and the caffein do not combine. The iodine solution and the caffein do combine, and all the caffein combines in this iodine solution. You ask what function on earth the hydrochloric acid performs; it dissolves the caffein much more readily, and aids [1766] the precipitation of the periodide—just why it does we do not know, but we do know it just makes the caffein dissolve easier than the pure water does. This iodine

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solution does not dissolve the caffeine at all, it precipitates it. You ask if it forms a precipitate then, out of these caffeine crystals; no, we dissolve the crystals in acid and add iodine to that, and it precipitates the caffeine in the form of a periodide. The waxy and resinous substances remain behind in the flask as we dissolve it with acid. Now, to go over that again, I take the caffeine and this waxy, resinous substance in the flask, then add 15 cc. of hydrochloric acid to that, and warm it—no special temperature—with a water bath until it dissolves. Then I pour that out and all the caffeine comes through that. I recover the caffeine through a filter, leaving the wax behind and the wax and caffeine is on the filter and the caffeine goes through. The wax which does not dissolve, and which is morrhous, is strained on this filter. Then when I get that strained out, I add iodine solution, and that precipitates the caffeine to the bottom of this hydrochloric acid solution, and that makes periodide of caffeine. Then I let that stand 24 hours to completely precipitate it. In other words, the precipitate goes to the bottom of the hydrochloric acid solution, and then you let that precipitate stand there where it fell for twenty-four hours. After that the solution of hydrochloric acid and the periodide precipitate is filtered, and that filtration lets the hydrochloric acid go through and strains all the periodide so that it stays on top of the filter or strainer. The filtrates—the filtrate is what goes through the strainer—we throw away. The periodide precipitate remains on top of the filter.

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Then that is decomposed with water and sulphurous [1767] acid, the solution transferred to a separatory funnel, ammonia added and the caffeine shaken out with chloroform. You say you think I skipped something, and you ask if I do not wash that periodide precipitate that is strained out with an iodine solution; yes, twice. That is just an added precaution to get rid of anything that might be in the solution that you do not want, I do not know what that iodine solution would take out—what might be there, and what it might take out—it is just a precaution. There could not be any of that waxy resinous substance in there. You ask if there is anything else in the world there but the iodine and caffeine; we do not know, there might be other things. You ask what could come out of the iodine solution that precipitates this caffeine; well, when you originally shake out the chloroform in these unknown mixtures, that may bring out things of unknown composition, depending on what is in them, and the purpose of the iodine precipitation is to free the caffeine from anything that would dissolve subsequently in acid, and which is not precipitated by the iodine, and which, of course, would be in the iodine solution, and if the precipitate was not washed on the filter, the small amount of iodine solution which necessarily adheres to the filter would contain these small quantities of unknown substances which later might contaminate the final caffeine residue; hence, to provide for this contingency, we wash it out with iodine. You ask if I have ever found anything but these waxy, resin-



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ous substances to come out in the original chloroform solution along with the caffein; sometimes the hydrochloric acid solution, after it has been filtered from the waxy resinous matter, is colored. [1768] To what that color is due we do not know, and I never have determined as it was not essential. The color may be brown, or it may be yellow—just different colors. On adding iodine you precipitate the caffein away from this coloring material, whatever it may be. Yes, sir, I understand the formula of Coca-Cola. I do not know of anything in Coca-Cola syrup that could be taken out by the chloroform except these resinous, waxy substances. Aside from these I do not know of anything in Coca-Cola syrup that would dissolve in this iodine solution except caffein. Now, we have gotten to the point where we have the periodide—that is the caffein and iodine solution—precipitated and strained out of the hydrochloric acid, and washed in the iodine solution. To wash it in iodine solution you run iodine on to it—just pour it onto it. In other words, you pour it on and the iodine which you pour on goes through the strainer and still leaves this periodide precipitate on top of the strainer. This iodine solution is the same kind and is of the same strength. When the caffein is combined with iodine so as to form periodide, the addition of another solution of iodine would not have any effect whatever on the caffein, that is in the periodide. It could not have any effect on the waxy resinous substances because they do not combine with iodine solution—but that has been disposed of

(Deposition of Dr. H. B. Fuller.)

any way. You ask then what else could there be in this periodide that could be taken out by these two water washes of iodine solution; I do not know, as I told you, what it is. Certainly I have taken something out of the periodide with these two iodine baths—I have never determined what it was, though periodide, in [1769] general, is the compound formed by iodine and the substance which forms the periodide—it is a definite chemical body which may contain one or more atoms of iodine. A number of metals, besides caffenin can unite with iodine to form periodide such as sodium, potassium, cocaine, and its associate alkaloids and in fact almost all alkaloids and synthetic substances, like acetanilid antipyrin, morphine, strychnine, etc. Nothing else in Coca-Cola syrup aside from the caffenin that is in there would combine with iodine to form periodide. Any foreign matter at all would come out through this of solution with which I produced the precipitate screen or filter along with the hydrochloric acid, and the filtrate, and would not remain on top of the screen with the periodide, so that you have the periodide absolutely free from this foreign substance after it is precipitated and strained, and then that periodide contains absolutely no other substance, or ingredient, except the iodine and the caffenin in combination. Then, after that I wash the periodide with this iodine solution twice, and then I treat the periodide, which is still on top of the strainer, with sulphurous acid by pouring the acid over it. The sulphurous acid is a dilute sulphurous acid of no spe-

(Deposition of Dr. H. B. Fuller.)

cial strength. I do not know what strength I usually use, it does not matter. The sulphurous acid breaks up the periodide and allows the caffein to dissolve in the liquid the iodide forming an iodade—virtually forms hydriotic acid. In other words, the pouring of sulphurous acid over this periodide again and separates the caffein from that periodide combination—extracts all the caffein from that combination—and brings it into solution, and then that solution filters through the [1770] filter. The filtrate is then composed of caffein in solution in sulphurous acid. You ask if any part of the sulphurous acid combines with the iodine in the periodide; yes, it converts the iodine, as I say, into hydriotic acid—some soluble form of iodine. Some of the water in the sulphurous acid combines with the iodine to form that. No other properties of the sulphurous acid combine with the iodine to form that substance except water. All the water does not leave the sulphurous acid, but just enough to combine with the re-action. The chemical formula for hydriotic acid is  $\text{HIO}_3$ . The chemical formula of sulphurous acid is  $\text{H}_2\text{SO}_3$ . After the water had separated from the sulphurous acid to unite with the iodine and form hydriotic acid, then probably a little sulphuric acid would be formed there, the formula of which would be  $\text{H}_2\text{SO}_4$ . What you have there is an excess of sulphurous acid and that converts the iodine into this hydriotic acid, and you still have a large excess of sulphurous acid. When you started out with the sulphurous acid you had  $\text{H}_2\text{SO}_3$  but after the water



(Deposition of Dr. H. B. Fuller.)

of the sulphurous acid has been taken out to unite with the iodine then you have  $\text{H}_2\text{SO}_4$ . You ask if I got that extra molecule of oxygen from the air or where does it come from; water takes part in the reaction,  $\text{H}_2\text{O}$ . You say you know that, but that the  $\text{H}_2\text{O}$  leaves the sulphurous acid to go with the iodine, and that I only had three molecules of oxygen to start with in the sulphurous acid and after I lose some of that then I have four molecules of oxygen; Yes, those reactions take place with two molecules of water, so you have your two  $\text{H}_2\text{O}$ 's there. The practical effect of that is that the filtrate that goes through finally consists of caffeine [1771] and sulphuric acid, and the excess of sulphurous acid. Then you neutralize that filtrate with ammonia and shake out with chloroform. No, I do not think I have skipped a process in there. The ammonia neutralizes the acid in the solution so that the caffeine will come out readily. Caffeine won't come out absolutely when the solution is acid, it will come out with a fair amount of ease, but we add ammonia to make it come out easier. I add enough ammonia to produce an alkaline reaction. At that point I test it with Litmus paper to see whether or not the acid is alkaline. If it turns it from red to blue, it is alkaline. Then I shake that neutralized solution with 70 c. c. of chloroform altogether. A moment ago in referring to the sulphurous acid which I pour over the periodide, I did not state the quantity of sulphurous acid used, because it does not make any difference. Now, I take 70 c. c. of Chloroform and shake the neu-

(Deposition of Dr. H. B. Fuller.)

tralized solution five times, use first 25 c. c., then 15 c. c. and 15 c. c. again, then 10 c. c. and finally 10 c. c. After I have shaken it out then I just allow the chloroform to evaporate, and what is left is the caffein. Then I dry that and weigh it. In my analyses of Coca-Cola syrup I have had these waxy, resinous substances, and this coloring matter to come out with the caffein, and that is why I adopted this method.

Mr. HIRSCH.—“Read the question, now, and see whether or not you understand the question.”

Mr. LITTLETON.—“I object to his interrupting with that kind of objection.” [1772]

**Deposition of C. M. Satterfield, for Plaintiff  
(in Rebuttal).**

C. M. SATTERFIELD.

Direct Examination by Mr. HIRSCH.

I am thirty years old, and reside at Greenville, Ala. I am employed by the Coca-Cola Company, and have been employed by that concern for the past three years. I am an advertising man and salesman. I was in Ocala, Fla., in 1912, 1913, and 1914, and while there I went to the Anti-Monopoly Drug Store, of which Mr. Groves is proprietor. I called for Coca-Cola three different times and got a drink in response thereto. The syrup was drawn to make up the drink and they gave it to me in response to my order for Coco-Cola. Nothing was said to me as to whether or

(Deposition of C. M. Satterfield.)

not it was Coca-Cola, and no explanation was made to me at the time.

(There was no cross-examination of this witness.)

**Deposition of Dr. H. C. Fuller, for Plaintiff (In Rebuttal, Resumed).**

Dr. H. C. FULLER.

Cross-examination resumed by Mr. LITTLETON.

Dr. FULLER.—“Before we begin, I want to say that I have asked the Commissioner to explain that last statement that was made by me, and I want to state emphatically, now, that these waxy and gummy substances spoken of were not in Coca-Cola, and I do not want my answer to be taken as one that makes it appear that these substances were present in Coca-Cola. I was talking about the method in general, as I understood the question asked.”

Yes, my attention was called to that by Mr. Hirsch, after we adjourned for lunch and I discussed it with him, and with the commissioner. My attention was first called [1773] to that by the objection made at the time I answered the question. Now, this process I have detailed is the practically process I have always used in determining the caffein content of these various syrups; originally, we had a little different procedure, but the essentials were the same and the results were practically the same. The difference in methods did not yield any appreciable differences in the results obtained thereby, except that, as originally carried out, it was determined that there was a slight loss by the method—in other words, we did not get it all. There was not any loss during



(Deposition of Dr. H. C. Fuller.)

the manipulation, the loss came because we did not get it started right. No, I never made a determination to see how much loss there was, and I do not know how much was lost in the original method from the present method, or how much variation there was between the two methods. You ask me now to explain in detail the process by which I formerly extracted the caffein; to get a clear understanding in the record, the original process, I might say started with the same quantity of syrup as I remember it—it may have been 50 c. c., instead of 25,—and the syrup was treated with ammonia and evaporated to a thick consistency—in other words, practically all the water was driven off. When it reached this stage it was treated with alcohol, probably 50 c. c. of alcohol being added. With a sugary mixture of that kind, the alcohol does not mix like it does with salt water. The alcohol has the same property under these conditions of extracting caffein, as chloroform does from the water, as I explained in the other process. By this process the alcohol after being mixed with this and stirred—thoroughly incorporated, you might say, with it—was poured off, and the process repeated, four extractions, I think, being made that [1774] way. Then the combined alcoholic solutions were evaporated and that residue dissolved in water, and the procedure with chloroform conducted as outlined before. Now, going over that process again, chronologically, so as to make it clear, I would take either 25 or 50 c. c. of syrup, put it in a porcelain evaporating dish, and heat it over a steam bath, until the water

(Deposition of Dr. H. C. Fuller.)

was driven off. The precise moment at which the heating was stopped, depended more or less upon the consistency of it; the time was never a factor, and there was always a stirring-rod put into the mass, and when it became thick enough to be considered done, it was taken off. The syrup was heated and evaporated until it was more of a thick molasses. In that heating process none of the caffeine was driven off. Then after it was gotten into that molasses-like condition, as we will call it, the next step was to extract it with alcohol. Caffeine is soluble in alcohol, and the alcohol would extract all the caffeine from the syrup, and did extract practically all of it in my operations. There seemed to be some cases where it did not entirely extract it, due to a personal factor at the time. No, I did not test the syrup afterwards to ascertain if all the caffeine had been extracted; it was not done that way. We put in known amounts of caffeine, and determine whether we got that out every time. I do not remember when we first began to make this test of that description, to determine whether or not all of that caffeine had been taken out. I cannot recall about the year when I began. It was longer than two years ago, and possibly five or six. I do not think it was as long as eight years ago. Anything I say in [1775] that line is simply surmise, because I could not give you any exact date. I think it was before I had gone with this Institute of Industrial Research, and while I was still with the Government. My suspicions became aroused that my original method was not extracting all the caffeine,

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and I was prompted to make this test as to the correctness of my former methods because, after the examination of soft drinks became so important that it was necessary for the matter to be submitted to the Association of Official Agricultural Chemists, we found that working on the same samples different workers obtained different results; we looked for the reasons, and as every chemist is continually working to improve his methods of analysis we found that there was a better method of extracting the caffeine than the old original method, which I have just outlined, and it seemed to be the consensus of opinion that the procedure of evaporation and use of alcohol had an objection, and was likely to be productive of a source of error; hence the new method was finally adopted as a better one. We evaporated the syrup because the alcohol would not mix with the solution and we could not separate it at all with that mixture. In the evaporating process the water was evaporated from the syrup, and I suppose some of the flavoring would go off, but the water was the main thing we were getting rid of. We extracted the caffeine with 94 per cent alcohol—ordinarily it is called “U. S. P.” alcohol. I do not know precisely the amount of alcohol used in extracting 25 c. c. of the syrup, but I would use 25 c. c. at a time. We used more alcohol than syrup, but I do not know whether it was twice the amount or not. Now, after we extracted the caffeine with this alcohol [1776] extractive, we had then, in the extract, caffeine and other substances,—probably some little sugar would go through—some of the



(Deposition of Dr. H. C. Fuller.)

invert sugar, and a little coloring matter the caramel. Very likely there were other things that came through besides those. I did not determine whether anything else came through or not. That is all the alcohol would extract from the evaporated syrup. The next step in the process was,—that the alcohol was evaporated, the residue dissolved in water, ammonia added to the procedure, and the chloroform extraction which I outlined before was again gone through with—just a reiteration of the testimony on the other method from there on. When the alcohol was evaporated that left the caffeine, the sugar and the coloring matter. When the alcohol was evaporated anything that the alcohol brought out that might be volatile still, was also evaporated. Neither the coloring matter, nor the sugar that came out was volatile, and those are the only two things that I mentioned that I knew came out. Then that caffeine, sugar and coloring matter was dissolved in about 20 c. c. of water—it does not make any difference as to the temperature. Then chloroform was poured into the container which had had this solution of caffeine, sugar and coloring matter in it, in the water, and the chloroform then took the caffeine to the bottom with it and left the coloring matter, water, and sugar on top. When I drew off the chloroform with the caffeine it took all the caffeine out and the subsequent process from there on was just like my present process which I have already outlined. At that time I also treated the caffeine that I got after evaporating the chloroform with this iodine solution. You say that one of

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the criteria by which [1777] I determined that Exhibit 131 was not Coca-Cola syrup was the flavor, and you ask what the difference was in the flavor of the syrup in Exhibit 131 and the flavor of Coca-Cola syrup; well, that is something that you cannot describe in words, unless it is so very distinct that it is different, for instance if it was a distinct flavor of something very unusual, you could describe it, but where you have blends of flavoring substances like those present in syrups of similar appearance and for similar purposes, the only way you can tell how they differ is to try it out—what we call organoleptic test. The way we do it is to take a sample in question and compare it by taste with samples of known origin. The sample of Coca-Cola syrup with which I tested the taste of Exhibit 131 came from the Coca-Cola Company. You say I did not know it was Coca-Cola syrup except from what they told me? I am practically certain it came from the factory. No, my testimony on that point is based on something more than hear-say. I know positively of my own knowledge it was Coca-Cola syrup. No, I did not make it. I analyzed the syrup with which I tested Exhibit 131, and my analysis showed it to be Coca-Cola. I analyzed it for specific gravity, caffeine content, phosphoric acid content, Merchandise No. 5, and flavor. You ask what its caffeine content showed; I do not remember all these figures, but it was an average sample of Coca-Cola. You ask if I remember what the phosphoric acid content was; probably about .21 per cent, but I could not give you the exact

(Deposition of Dr. H. C. Fuller.)

figures; I have not got the figures here. I do not recall any of the figures definitely. No, I have not got the sample at my place of business; it was used up long ago. No, sir; I cannot give you any idea of the [1778] difference in flavor between these two syrups. There was a very appreciable difference, a very pronounced difference. When I speak of flavor, I mean taste. I tasted both syrups. No, I did not add carbonated water to them, I tasted them just in the straight syrup form. Yes, I smelled them, and there was a very appreciable difference in the odor, a very pronounced difference in the odor. You ask what is the color of Coca-Cola syrup; well, it is another one of those tests that you cannot describe. It is an odor of the blend of the flavors that are used in them. Just what it is I cannot describe it. You ask if there is any characteristic flavor of the coca-leaf, in Coca-Cola syrup; well, the flavor of Coca-Cola syrup is not the flavor of any one thing. It is a very peculiar blend in which no one thing sticks out more than anything else. No, I was not able to detect the characteristic odors of coca leaves or the extract of coca leaves in Coca-Cola syrup, nor was I able to detect the characteristic taste of coca leaves or extract of coca leaves in Coca-Cola syrup. You ask if I could detect the acid taste in it; that is really not a taste, it is really more of a sensation. You ask if it is phosphoric acid or the lime juice that produces that sensation; well, they, probably, both contribute, the relative pungency of one more than the other I could not say. You say



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that if there is any predominating flavor to Coca-Cola syrup it is the lime juice; I should not say so, it is a blend. I do not think it is any one thing more than anything else. I cannot describe the difference in flavor, and I cannot produce the sample with which I tested the flavor and odor. Now, I also said that the reaction from Merchandise No. 5, differed in the sample filed [1779] as Exhibit 131 from this sample of Coca-Cola syrup with which I tested it. The difference is in the intensity of the tannin extracted by the ethyl acetate. The coca tannin is a very characteristic substance, its reaction in lead acetate is particularly characteristic, both in color and in amount, and its intensity as to color as affected by iron salts is also characteristic. The tannin does not precipitate, and substances added to this sample, Exhibit 131, gave a very copious precipitate of lead. The iron reaction was almost negative. I submitted this sample, Exhibit 131, to the four tests which I will call the Merchandise No. 5, tests. The first test was the iron-chloride reaction. I took the syrup, extracted it with ethyl acetate the same way as you extract it for getting out caffeine with chloroform, and the ethyl acetate separates *out it* on top this time, and the syrup is drawn off into another extra separatory funnel, and the process is repeated three times. Then I combine my ethyl acetate solutions, evaporate them, and the residue I divide into four parts. One part I test with iron chloride; the second with lead acetate; the third with cinchonine sulphate, and the fourth with gelatin. Then the syrup is extracted

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with this ethyl acetate; the ethyl acetate takes out the coca tannin, caffenin, and some of the flavoring oils, just which oils I do not know. I do not think anything else comes out. I do not think it takes out any of the cola tannin. It might take some of the colanine out. There is only one kind of tannin, or tannin-like substance in coca leaf. Now, we have got the coca tannin, the caffenin, some of the flavoring oils, and possibly some of the colanine, in this solution of ethyl acetate, [1780] on top of the syrup and the syrup now has been drawn off the bottom, and we have taken this solution of these articles in the ethyl acetate and put that in a separatory funnel, and the process has been repeated three times. Now, at that point, I evaporate the ethyl acetate and that leaves the coca tannin, the caffenin, and possibly the colanine, the flavoring being dissipated in the evaporation. Then these substances are dissolved in water, filtered, divided into four parts and submitted to the four tests above mentioned. Caffenin dissolves in water and probably colanine dissolves in water, and I expect coca tannin does also. When the solution of these substances in water is filtered through a paper filter, then the filtrate—that is what comes through the filter, the solution is divided into four parts, and that solution still contains the coca tannin, some of the caffenin and possibly some colanine. Now, the first part of this solution is placed in a test tube, and treated with a drop or two of iron chloride. Then I observe the depth of the color. The reagent colors the whole solution. It does not always color the solu-

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tion the same color; sometimes it does not color it at all. It colors it all the same way if it is Coca-Cola, but if it is not Coca-Cola, very often it does not color it in any way, shape or fashion. The color it produces in Coca-Cola is probably a greenish-black or greenish-brown. Of course, I always run my tests with a known sample of Coca-Cola at the time so I can be sure of my shade in case it gives any color. I find that the color which Coca-Cola produces when subjected to this test is of the same uniform density. You ask which predominates, the brown or the green, [1781] in the test of the Coca-Cola syrup; well, that is getting pretty fine, I think it is about like flavors, it is a sort of greenish-brown or greenish-black; I do not think you could say which predominated. When I get the greenish-black color, that indicates there is tannin there, and very probably coca tannin, but not necessarily so. No, sir; I have not made the same test on cola tannin and I cannot say whether cola tannin would produce the same result or not. I cannot say that I have made any conclusive tests along that line. I made a test once, when I was in Chattanooga, on cola extract, and the results that I got there were so meagre and the condition under which I got them so unsatisfactory, that I do not consider that they amounted to anything; so I cannot testify as to cola tannin. You say then, that so far as I know, that test with iron chloride would not determine whether the tannin in the sample under analysis was coca tannin or cola tannin; well, I am not familiar with cola tan-



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nin. I have worked a good deal with coca tannin, and the tannins that are extracted this way from Coca-Cola, but whether there is any cola tannin in it or not, when it comes to Coca-Cola, it does not matter, because we are always comparing it under the same conditions. Coca tannin gives a clear color, very characteristic. I have obtained large quantities of it from coca-leaves, purified it, worked with it under all sorts of conditions, and am pretty familiar with the color when I see it. I said this greenish-black color was the color that the coca tannin gives with iron chloride. I have not tested to ascertain how colanine will respond to the [1782] iron chloride test, and, of course, never having tested it, I do not know whether or not the colanine would respond to that test the same way as the coca tannin does. The effect produced on Exhibit 131 when submitted to the iron chloride test was a very faint coloring, a sort of dirty color—non-descript. You ask if I can give you some idea of about what color it was; oh, just a dirty shade. You ask if it was a kind of greenish-brown, too; well, it was dirty, that is about all I could say—I would not say that it was greenish-brown, or greenish-black; I would just say it was non-descript—certainly it was not anything like the color Coca-Cola syrup gives under those conditions. You say that I said Coca-Cola gives a greenish-brown or black color, and that I now say this sample gave a greenish-brown or black color; no, I have not said that either; that is just what I did not say. I said it gives a dirty color, and the color is very much less

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intense than the same amount of Coca-Cola syrup would give under similar conditions, and it is a very good indication when you get that reaction, that you have not got any coca tannin, and that that syrup is not Coca-Cola. You ask me to describe as near as I can the color of the reaction produced in Exhibit 131. I have described it as near as I can. No color predominated, it was a dirty color, and I do not remember what the particular shade was—what I would call a non-descript appearance. You ask if I would call water of non-descript appearance; water has no color. A non-descript appearance is something, that it is difficult to describe. You ask if it was green; I said it was a dirty color, that I cannot describe, that is as far as I can go. You ask what was the [1783] nearest color it was like; I do not know. I cannot say whether it was nearer red than green. I cannot tell you, and I cannot describe for the benefit of the Court, what color it was. I said it was not like the color you get with Coca-Cola syrup, and it was non-descriptive, so far as I am concerned, but I cannot describe that color. Now, when the tannin-like substances are obtained from Coca-Cola syrup in the way which I have described and treated with lead acetate, the aqueous solution goes to precipitate with lead acetate, giving down yellowish, white, at first, and gradually clearing until it remains a characteristic yellow tinge. That precipitate forms in the bottom of the receptacle. It first comes down yellowish white and after standing a little bit it clears altogether and has a distinct yellow color. That in-

(Deposition of Dr. H. C. Fuller.)

dicates coca tannin. I have never made that test with either cola tannin or with colanine, and I do not know whether either of those two substances would respond in the same way to that test or not. Now the sample from Exhibit 131, which was subjected to this test, gave a very copious precipitate, which had a sort of gray color, the amount was very large—much more than a sample of Coca-Cola ever gives, and it did not color on the bottom like precipitate of the lead with the tannin from the coca leaf. When I make the test on Coca-Cola syrup, the precipitate agglomerates together and forms a morphous precipitate, which settles out, leaving a clear supernatant liquid. A supernatant liquid is a liquid that stands above anything. It means that the liquid stands above something on the bottom—for instance, if you have a glass full of water, and the button on the bottom, remaining on the bottom [1784] of the glass, of course all the liquid above that is supernatant liquid. I forgot to mention awhile ago, and I will state now to save time that this ethyl acetate extract which I separate into four parts to be subjected to the four tests mentioned, is a yellowish or pale brownish tint in Coca-Cola before it is submitted to any of the tests. I cannot recall absolutely now whether or not I observed that same tint in the ethyl acetate extract of this Exhibit 131. The precipitate produced by the lead acetate in the ethyl acetate extract of the Coca-Cola syrup settles at the bottom as a solid mass. There is not usually enough to make very much of a deposit. The test



(Deposition of Dr. H. C. Fuller.)

tubes which contain the four samples submitted to these tests, are, I should say three or four inches high, and a half inch wide. About three or four c. c. or may be five c. c. of the sample to be tested is poured into the test tube. That would make about a quarter of an inch of the extract. This lead precipitate which comes down covers the bottom of the test tube. I do not know how thick from the bottom to the top that precipitate would be, it is just a deposit on the bottom, maybe a little more than a fifteenth or a twentieth of an inch. The form of the precipitate that was given down by Exhibit 131 was not like the form of the Coca-Cola precipitate. It did not agglomerate at all—in fact did not settle out entirely, but remained in that suspended condition something like twenty-four hours, and, finally stood that way. I suppose there was a little of the settling on the bottom of this same colored material, but the general appearance of the solution was that dirty color. I [1785] would not say it was a skimmed milk color, but it was turbid, and maintained that same color. Now, the tannin from Coca-Cola syrup when treated with the third test,—the cinchonine sulphate test, gives a negative test, that is, gives no precipitate. There are very few tannins that don't precipitate with cinchonine, but the tannin from the Coca leaf is one of those that does not precipitate, and cinchonine sulphate has no effect on that solution at all. I have never tested colonine or cola tannin with cinchonine sulphate. Coca-Cola syrup and Exhibit 131 responded in the

(Deposition of Dr. H. C. Fuller.)

same way to the test for cinchonine sulphate; no precipitate was obtained in either case. Now, as to the fourth test, the tannins obtained from Coca-Cola syrup give no precipitate with gelatin. I have not tested cola tannin or colanine with gelatin. Exhibit 131 when treated with gelatin did not give any precipitate either. The gelatin had no effect whatever on the sample of either the Coca-Cola syrup or of Exhibit 131. I have not any idea how many kinds of tannin there are. There are a good many more than eight or ten. Yes, I have treated a lot of other tannins with these four tests I have mentioned. You ask me to take one of them and tell you how it responded to the iron chloride test; well, I cannot now, because it has been so long since I performed the test that I do not remember it. But, I do not know of any two that react with iron exactly alike all the way through, they are different colors, some give a black color, some bluish, they react with leads [1786] and most of them give precipitates with cinchonine sulphate. You ask if Cola tannin differs in its reaction from these others I am speaking of; well, cola tannin is not a very well-known substance. In fact it is doubtful if there is any tannin in cola. They talk about cola tannins, but the best knowledge that I can obtain now, that is what I have seen written, literature, there may not be any tannin at all in cola. You ask how long I have entertained that opinion; I do not say that is my opinion, I say I have simply seen it in literature. You ask what is my opinion about it; well, I do not

(Deposition of Dr. H. C. Fuller.)

know. I presume there is a small amount of some tannin-like substance in cola, very likely there is—in fact I have always thought there was some, but in the light of other knowledge that other people have gained, it may be that we will find there is not any there. The cola nut is a peculiar thing. It is not like a leaf, or a bark, or a root, all of which contain tannin, it is really a fruit—they call it a nut, but it is not a nut in the strict sense of the word, but just what the character of this substance is which they have always spoken of as tannin, is at present uncertain. No, I do not recall the names of any of the works which I have read that stated there was no tannin in cola, in fact, I won't say that they say there is no tannin in cola. I was just trying to determine what this substance was, and there was some doubt cast as to whether there was such a substance as what we know as tannin. No, I have never made any analysis of the cola nut to ascertain the quantity of tannin therein. I have made an analysis of the coca leaf to ascertain the amount of tannin therein. I have used a good [1787] many pounds of coca leaves in my experiments, I do not know how much I have used for any one test, but know I have never used such an amount as 380 pounds of coca leaves in making the tests. The amount of tannin in one pound of coca leaf runs anywhere from eight to fifteen per cent, depending on the leaf and its source. By its source I mean locality from which it comes, its habitat. There are different grades of coca leaves on the market and



(Deposition of Dr. H. C. Fuller.)

they vary—in fact any kind of product of that kind varies. You ask if there is much variation between the tannin in Truxille coca and Huanoca coca; well, I have forgotten now whether I ever determined that point absolutely. I could not say now whether there is any difference or not. You ask if this Huanoca coca is not the same thing as the Erythroxyton coca; I have not had occasion to use those commercial terms in so long I have forgotten. I guess I had better not testify about that. The Erythroxyton coca is the botanical name for coca leaves, and the different varieties, or races—they are really called erythroxyton coca, but these names are applied to them for various reasons, commercially—the source they are shipped from and the locality in which they grow, but there is not much difference in the basic plant. I said that in my analysis of the coca leaf I discovered only one tannin and that I know generally from my knowledge of chemistry and the text-books I have read that there is only one tannin in the coca leaf, and only one tannin-like substance therein. You ask if colanine is not a tannin-like substance; I do not remember now just exactly what the characteristics of colanine are. I am sure [1788] I would not like to testify about that. Yes, I think there was a time when I was of the opinion that there was a considerable quantity of tannin in the cola nut. When I first took up the study of it I think I was impressed with the idea that it contained tannin-like substances in quantity. No, I do not recall about when it was my opinion changed on

(Deposition of Dr. H. C. Fuller.)

that subject. I think it was before I went with the Institute of Industrial Research, and while I was employed by the Government, but just how long it was before I quit the Government I do not know. I do not know whether or not there is any other tannin which, when treated with iron chloride, yields the same reaction that coca-tannin does. And the same is true with respect to the lead acetate and cinchonine sulphate and the gelatin. The conclusion I have formed from the reaction of the iron chloride upon Exhibit 131 is that it was not characteristic of the tannin that should be present in Coca-Cola. I do not know what substance would respond to the iron chloride and the lead acetate tests in the same way that the sample from Exhibit 131 responded to those tests. Coca tannin would respond to the cinchonine sulphate and the gelatin test the same way exactly that Exhibit No. 131 responded to those tests. There might be a hundred other things that would respond to those tests the same way. These four tests which I call the Merchandise No. 5 test, are the only tannin tests I have made on any of the exhibits about which I have testified in this case. I did not test Exhibit 131 or any of the other exhibits mentioned to find out whether or not they contain any of the other ingredients of Merchandise No. 5. I have known of these four tannin tests ever [1789]. since I heard Dr. Mallett testify in Chattanooga. I had read of them occasionally before that, you might say. He was a witness for the Coca-Cola Company in that case and so

(Deposition of Dr. H. C. Fuller.)

was Dr. Caspari. No, I did not get Dr. Mallett and Dr. Caspari to tutor me in this method of discovering tannin. I went home and tried it out, myself. That is the first time I tried it out, immediately when I got home, as soon as I got back to Washington. No, up to that time I had not been analyzing and making tests for tannin for the Government very much. No, sir I had not made extensive tests for tannin up to that time. Yes, sir, those four tests were given in standard text-books on chemistry at that time, one of which was Allin's Commercial Organic Analysis, with which I was familiar. I was familiar with that work when I went down to Chattanooga to testify in that case. You ask if I was familiar with the results which that work said these tests would yield; now, I will have to make a qualified answer to that. I was familiar with the results that had been obtained on the tannin in the coca leaf, but I was not familiar with the methods of performing it in connection with this syrup, I was not what you might call familiar with it. I had read it over, and knew there were those tests. Yes, I think I have tested the extract of the coca leaf with these four tests. You ask what reaction I got from the extract of the coca leaf when treated with iron chloride; well, anything that I say would be more or less of a surmise, and I would rather not answer, because I do not remember. My work was done principally with the pure tannin which I made myself, and I worked with large quantities of that. I presume I have worked with the extract of the coca—



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[1790] but I am not positive about it. No, the extract of the coca leaf, if submitted to these four tests would not yield a different reaction from that which I obtained from the sample of Coca-Cola syrup which was prepared for the test in the manner above stated; there would be no difference between the reaction given by the tannin extracted from the extract of coca leaf and from Coca-Cola syrup. There would be no difference between the reaction produced from just the extract of coca as it comes out of the coca leaf and the same amount of Coca-Cola syrup, not in so far as this tannin test is concerned. You ask if I have ever made that experiment; well, as I say, I am not positive about that. I do know positively that they would yield the same result, because they have the same tannin in both cases. You ask if there would be any difference in the reaction if I put two different kinds of tannin into the solution, say coca tannin and cola tannin, and submitted that solution to these same tests; that I do not know. It depends on the relative quantity of the other tannin to the coca tannin. We know that it exists in Coca-Cola, and it does not make any difference, because, as I said before, you get the same reaction from the tannins extracted from the coca leaf as you get from the Coca-Cola syrup. You ask how I extracted the tannin from the coca leaf; well, I have not got the details of that work here, it was a long process and I have forgotten how it was done. Yes, I certainly could do it again, but I would have to look over

(Deposition of Dr. H. C. Fuller.)

my work to see how I carried it out. I do not remember now. I do not think I could give you even a [1791] general indication of how it was done. I think I did submit Merchandise No. 5, to these same tests once. I am not sure that I did even once, but I think I have a recollection of doing it once. I have forgotten now all about how Merchandise No. 5, reacted to this test. You ask if I recall whether it reacted in the same way that a sample of Coca-Cola syrup reacts; I would not say, I really have forgotten. It ought to react the same way, but whether it did not not—just what reaction I obtained,—I do not remember. As far as I know the only thing from which Coca-Cola syrup could get tannin is from the Merchandise No. 5, so that Merchandise No. 5, when submitted to those four tests, ought to yield exactly the same result as Coca-Cola syrup would and as the extract of coca leaf would yield. The extract of coca leaf on which I made these tests was fluid extract of coca. There would be no difference in the reaction between fluid extract of coca and decocanized extract of coca, in so far as the tannin was concerned, when submitted to those four tests. I tested Exhibit 131 for its caffein content, its flavoring, its reaction for Merchandise No. 5, and its specific gravity. The specific gravity of that sample was 1.255, I also determined its phosphoric acid content, which was .21%, figured as P2O5 which is the same way I usually figure Coca-Cola syrup. Some people call it HP304. The ordinary way of reporting the amount of phos-

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phoric acid in any mixture is as anhydrate, which is P2O5. Now, the phosphoric acid as it is used in the commercial way, has the formula H3PO4—the same thing as [1792] P2O5 plus H2O. .21 per cent of P2O5, is the same thing as .30 per cent of H3PO4, and .30 per cent would be the measure of the actual per cent of phosphoric acid that was put into the Coca-Cola syrup—simply a difference in the way of reporting it, that is all. The phosphoric acid content of Coca-Cola, figured as P2O5 is .21%, so that from the specific gravity of Exhibit 131, and the phosphoric acid content of that exhibit I could not tell whether it was Coca-Cola or not, in other words, those two tests yielded about the same results as Coca-Cola syrup yields. And the only way I had of determining the difference between Exhibit 131 and Coca-Cola syrup was the fact that Exhibit 131 had .16 per cent caffeine, a difference in flavor and yielded to a different test for tannin, with the iron chloride and lead acetate tests, from the test which Coca-Cola syrup yielded. I do not know what the flavor of Exhibit 131 was. I do not remember whether or not I noticed any predominant flavor in that exhibit. It had a blend which was not the blend of Coca-Cola, and that is as near as I can come at describing it. I came to no conclusion as to what product Exhibit 131 is. I have examined some fifteen hundred samples of syrups, of this character. Once in a while I can tell just what product the product is, other than Coca-Cola syrup but not always. By continually



(Deposition of Dr. H. C. Fuller.)

analyzing known samples of other products of that type and comparing the reactions of the results obtained with samples like this, with those known samples, you can sometimes arrive at conclusions which are absolutely correct. That, of course, would be on the hypothesis that the particular syrup you have been analyzing is uniform. Or, if you have [1793] analyzed one of the same period, that is selected from the same factory, that is about the nearest you could say, that it is the same. Oh, yes, I have analyzed other syrups besides Coca-Cola syrup sufficiently to be able to distinguish them from other syrups of the same general character. You ask what are some of those syrups; well, I have analyzed Lemon-Cola, Ko-Nut, X-O, I think I have analyzed one called Childs Cola, something like that, Koke, and I have analyzed at one time about a hundred different samples when I was with the Government. I would not say that I could take a syrup and not knowing what it was, from the analysis of it tell you whether or not it was Lemon-Kola, Ko-Nut, X-O, Childs Cola, or Koke. I do not know, of course, how many analyses of Koke syrup I have made. I have analyzed some that were known to be authentic and others that were probably Koke, were picked up, I presume. I do not know as to the number and could not say. I have analyzed, perhaps, two or three samples of Koke which I know to be authentic. I only have one set of notes of my analyses of Koke. I have not any notes on any of the other beverages, Lemon-Cola, X-O, Ko-Nut, Childs Cola, or Koke.

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I do not think the phosphoric acid content of Coca-Cola ever has varied in any of my analyses of it. The sugar content of Coca-Cola syrup I found to vary from  $53\frac{1}{2}$  to 54, or perhaps two or three-tenths per cent. That is the greatest variation I have ever found in Coca-Cola syrup. That was the fountain syrup. I have also analyzed bottlers syrup for sugar content, but not many samples of it. I will have to refresh my memory from the notes as to what the [1794] analyses showed, I think it is about 58.2 per cent. It has not varied much in any of the samples I have analyzed. I have analyzed only a very few that I knew positively were bottlers syrup. A variation of from  $53\frac{1}{2}$  to 54.2 or 54.3 per cent in the sugar content of Coca-Cola might affect the specific gravity of the syrup some in the third or fourth decimal place, but not very materially. It would not affect the sweetness of the syrup. Before I forget it, I want to say that it takes two days to complete the test for a single determination of the caffeine content of a syrup of this character. The test for specific gravity takes about an hour. In determining the phosphoric acid content in a syrup of this character I use ten c. c. for a sample, measured the same way as for caffeine, diluted with water, treat with 5 c.c. of ammonia, then with 35 c.c. of magnesium mixture; stir and allow the precipitate to settle over night; filter; wash with dilute ammonia; precipitate, dissolve in dilute nitric acid; precipitate with ammonia molybdate; filter; precipitate; dissolve in 5 c.c. of ammonia; precipitate with 35 c.c. of mag-

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neseum mixture; allow to stand over night; wash with dilute ammonia; dry on filter; ignite from Bunsen flame; weigh as magnesium pyrophosphate, and calculate amount of  $P_2O_5$ , or  $HP_3O_4$ , from result obtained. The sugar content is determined by taking 25 c.c. of syrup, adding five c.c. of hydrochloric acid, allowing it to stand for twenty-four hours, diluted with 500 c.c., withdrawing 10 c.c. of that dilute solution and precipitating with Fehling's solution, which throws out a precipitate of copper oxide, filtering, weighing the precipitate, and, from the weight [1795] of that determining the amount of sugar present in the syrup. That last precipitate which I weigh, is not sugar, it is copper oxide, and from that is determined how much sugar I have had. Definite amounts of sugar precipitate, definite amounts of copper, with Fehling's solution, and we have that worked out for every milligram or tenth of a milligram of copper-oxide right on up, how much sugar it represents. There is no other method of determining the sugar content in a mixture of that kind that I know of. There are other methods for determining the phosphoric acid content in a syrup of this kind in addition to that heretofore explained, but I cannot give all the details of them; although, I think some people precipitate the first time with calcium chloride instead of magnesium mixture, and some people dissolve their molybdate precipitate in alkali and hydrate with acid,—get it volumetrically. The result is the same, though, in every instance—it is just a matter of the convenience



(Deposition of Dr. H. C. Fuller.)

of the worker. No, I have never analyzed Coca-Cola syrup to determine whether or not it had any nux vomica in it, but I always prove that it is absent by certain tests that I make. I always test these soft drinks for the presence of any other alkaloids, than caffein and none of them that I have analyzed now, ever do contain any but caffein. The test by which I determine the presence or absence of nux vomica in a syrup of this character is this: You proceed to treat the syrup with ammonia and extract it with what is known as Crolius' mixture, that is a combination of ether, chloroform and alcohol. This is an emiscible solvent similar to chloroform and the syrup is extracted in exactly the same way as I described in the method for extracting caffein. [1796] the only difference in the procedure being that the solvent comes out on top instead of settling out at the bottom. By three extractions with Crolius' mixture from a syrup of this kind you can extract all of the higher alkaloids—I should say the stronger alkaloids, instead of higher—like strychnine, or cocaine, or quinine. Then the solvent solution is evaporated, taken up with dilute sulphuric acid, and shaken out five times with chloroform. You take out some caffein by that procedure, but you do not take it all out, and in order to separate the caffein from the other alkaloids, such as might occur in nux vomica or coca-leaf, or cinchona bark, you shake it out with chloroform and acid solution. After extracting with chloroform, ammonia is added and the mixture shaken with ether or chloroform solvent,

(Deposition of Dr. H. C. Fuller.)

separated and evaporated and tested for alkaloids. Any nux vomica, cocaine, quinine or any of the stronger alkaloids present will be in that solution, as well as the lesser alkaloids of the coca leaf. The alkaloids of the coca-leaf are: Truxiline, alpha and beta cinamyl benzoi lectomine, srococaine, these are exclusive of cocaine, as I understand you wished. That is all in the dry leaf. Hygrine occurs in the leaf when it is freshly gathered, but that disappears before it reaches the market. Yes, I have indirectly analyzed Coca-Cola syrup for oil of sassafras. You ask me to explain the analysis for that; well, in the various manipulations, especially the extraction with ethyl acetate for tannins, if there were any safrol present—which is the very characteristic odorous principle of sassafras—you would notice it very much, it would be very prominent; but [1797] I have never observed anything of that nature from “Coca-Cola.” Oil of sassafras is one of the very easiest of oils to identify. It would be taken out with the ethyl acetate. It is soluble in ethyl acetate. The only way you could determine its presence is by the odor. No, sir, I could not describe that odor, either. [1798]

I determined that Plaintiff's Rebuttal Exhibit 132 was not Coca-Cola by the same procedure that I have described about Plaintiff's Rebuttal Exhibit No. 1, that is by test for caffein content, flavor, merchandise No. 5 test, specific gravity. The specific gravity of Exhibit 132 as 1.256. The phosphoric acid content figured as  $P_2O_5$  was .21.

(Deposition of Dr. H. C. Fuller.)

(It is stipulated and agreed that when Dr. Fuller refers to  $P_2O_5$  unless otherwise specified.)

I have not got the caffein content of Exhibit 132 in my notes, and therefore cannot state what it was. This Exhibit differed in flavor from Coca-Cola and merchandise No. 5 reaction were not like Coca-Cola, when treated exactly the same way as I treated Exhibit 131. The reaction of Exhibit 132 with all four tests, namely, the iron chloride, the lead acitate, zinchonine sulphate, and gellatine, responded exactly the same way as did Exhibit 131, to each of those tests. I did not determine from Exhibit 132 what the syrup is. The specific gravity of Plaintiff Rebuttal Exhibit 133 was 1.253, caffein content .14%, phosphoric content .19%. Tannin test the same as Exhibit 131 and 132; flavor not like Coca-Cola, same as Exhibits 131 and 132. The odor and flavor of Exhibits 131, 132 and 133 were all alike. I did not determine from my analyses what product 133 was. I don't remember ever having known Coca-Cola syrup to have as low a phosphoric content as .19%. I think .20 is the lowest limit in my investigation. The difference between .19 and .20 is not so very much, but the normal content of Coca-Cola syrup is .21, so that you will allow .2 on one side and .2 on the other side, you get pretty near to nine and it is [1799] a long ways. The specific gravity of Plaintiff's Exhibit 134 was 1.2693; Caffein content .20%; phosphoric acid .22%. The odor and flavor of this Exhibit were the same as Coca-Cola; the tannin reaction the same as Coca-Cola. The specific gravity



(Deposition of Dr. H. C. Fuller.)

of Plaintiff's Rebuttal Exhibit 135 was 1.2714; caffeine content .17%; phosphoric content .21%, flavor not like Coca-Cola; tannin test not like Coca-Cola. The tannin test was not like the tannin test of Exhibits 131 and 132. The reaction of Exhibit 135 to the iron chloride and the lead acetate, were similar to coca-cola only considerably weaker—they were not like straight coca-cola gives. The odor and flavor of Exhibit 135 were not like 131 and 132. This flavor differed from any I have had yet. The specific gravity of plaintiff's rebuttal Exhibit 125 was 1.233, and caffeine content .15%; phosphoric acid .21%; tannin a trace, not like coca-cola, the flavor not like coca-cola; sample in a state of fermentation. The reaction on the tannin in this sample yielded to the iron chloride treatment very slightly. It was not at all like coca-cola reaction. I couldn't say whether or not it was like the reaction of Exhibit 131. Its intensity was much less than coca-cola, I don't remember how it did compare with 131. I don't remember what the color of the reaction was, I think it was a sort of nondescript color like the other. It formed very slight, very minute precipitates, it responded to the lead acetate test with only a very slight precipitate—not like Coca-Cola. You ask if it had precipitates, when treated both with iron chloride and lead acetate; well, the iron precipitate, it is more of a color, you don't get a [1800] precipitate really with that small quantity, it is really more of a color. You ask if the color was nearer like the Coca-Cola color or more nearly like Exhibit

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131. I cannot remember that. I know it was not anything like Coca-Cola. Oh, no, I have no independent recollection of any of these analyses except from my notes; I couldn't carry this in my head to save my life. My notes don't show what these analyses show, except that it was not like Coca-Cola, unless there was some very marked characteristic. It is not shown in the notes. In a case like this last sample where it was fermenting, I put that down, because that is an ordinary characteristic test for substances that are not coca-cola. I never knew Coca-Cola to explode. I never heard of a Coca-Cola bottle exploding. If a Coca-Cola bottle should explode, that would be a very good indication that it wasn't Coca-Cola. I don't know how the flavor and odor of Exhibit 125 compared with the odor and flavor of Exhibit 131. My notes don't show that feature, they just show it was not Coca-Cola—that is all they show. The specific gravity of Plaintiff's Exhibit 126 was 1.246, caffein content .13%, phosphoric content .21%. The tannin reaction slight, not like Coca-Cola; flavor not like Coca-Cola, and in a state of fermentation. You ask what causes the syrup to ferment; well, very likely the sugar breaking up forms alcohol. That is due to molds getting in—some kind of yeast spores, probably. I don't know the specific name in bacteriology for them, but that is what causes it. You ask what substances they would come from in the product; they wouldn't come from any substance really in the product. They may get in the process of manufacture—

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[1801] either the product was not cooked when it was made and the spores killed, or else it was allowed to stand and cool in the air, and the wild yeast that is always falling around dropped in, or the container it was in after it was put in, was open and wild yeast got in then—anything like that, and if the sugar content was low enough it would start to ferment. Oh, no, this wild yeast could not get in just from the atmosphere. You ask how low a sugar content would have to be to absorb the wild yeast from the atmosphere; well, I judge something about fifty per cent, I believe fifty or fifty-one per cent sugar, if it goes below that it would not take anything much to start it. The larger the amount of sugar you have, the greater the guarantee you have that there will be no fermentation, and one of the means to protect against fermentation is to add more sugar. Another means is to take in some preservave such as sodium benzoate, or sodium salicylate. You ask if the sugar is not the only harmless way to preserve it; I don't qualify on that. The analysis of Plaintiff's Rebuttal Exhibit 127 was as follows: specific gravity 1.2928; caffen content .076%; phosphoric acid content .22%; tannin reaction not like Coca-Cola; flavor not like Coca-Cola. My notes do not say whether or not the tannin reaction and flavor and odor are similar to Exhibits 131, or any of the others. I did not determine the sugar content of any of these samples. My analysis of Plaintiff's Rebuttal Exhibit 128 was as follows: Specific gravity 1.2956; caffen content .096%; phosphoric acid content .24%; tannin reac-



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tion, flavor not like Coca-Cola. The specific gravity of this sample, 1.2956, indicates to [1802] me that it is quite high compared to the other samples we have been discussing. If the specific gravity of a syrup of like character as the syrup under investigation is as low as 1.233 or 1.246 that would indicate that the sugar content was low enough to cause fermentation. Yes, sir, I could determine roughly the amount of sugar from the specific gravity—it is a measure of the syrup. The specific gravity is principally a measure of what sugar is in this product—it is a factor of the sugar. Yes, sir, I think specific gravity would also control the sweetness of the sugar. For instance, a syrup whose specific gravity 1.2956 would be a great deal sweeter than one whose specific gravity is 1.233 that is sweeter to the taste. My analysis of Plaintiff's Exhibit 129 was as follows: Specific gravity 1.245; caffeine content .13%; phosphoric acid .21%; tannin reaction not like Coca-Cola, product in a state of fermentation. I didn't report on the odor or smell. I think it was probably fermented so badly,—well, that I wouldn't say.

My analysis of Plaintiff's Rebuttal Exhibit 130 was as follows: Specific gravity 1.246; caffeine content, that I have not got; phosphoric acid content .21%; tannin reaction not like Coca-Cola, the product in a state of fermentation. You can tell when it is in a state of fermentation by opening the bottle, when the stopper comes out with a pop, and usually froths out of the neck of the bottles indicating

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gases in there. That is the only way by which I determine that these samples here under determination were in a state of fermentation. Aside from Exhibit 134, which I said had the same tannin reaction, and the same odor and flavor [1803] as Coca-Cola syrup, I did not determine what specific product any of the other exhibits were.

Yes, sir, I have made an analysis of "Koke" syrup. I suppose it was the product of the Southern Koke Company of New Orleans, Louisiana. I presume the method whereby I got the "Koke" syrup as set out in the report there dated July 17th, 1914, test No. 286, if it is on there, that is what it is—that is correct. Page 2 of that report correctly sets forth my analysis of Koke syrup. I got out this report myself, and this description of the label on the jug is a correct description of the label that was on the jug. The lead number test mentioned in this analysis is a new test that I have been trying out on syrup lately—trying to see whether it has any significance in the analyses for soft drinks. I have not come to any conclusion about it yet, but simply put it in there because I am trying it on syrups now. I have tried it on Coca-Cola syrup, and I have one figure here of 11.48—Coca-Cola runs from 11 to 12. The analysis of Koke syrup which I made and which I have above referred to was as follows: Specific gravity 1.2679; caffenin content .16% ; phosphoric acid content figured as 1.205 .24% ; sugar 53.75% ; lead No. 12.7; color caramel; no alkaloids others than caffenin; no preservatives; no sacpharin; vanillin taste strong, but

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very slight tannin reaction; flavor not like Coca-Cola and very tart. On opening the jug the odor which often accompanies glycerin was very apparent.

(Defendant here tender and offer in evidence as Defendants' Rebuttal Exhibit No. 10-1, and 10-2, the report above [1804] referred to, dated July 17th, 1914, being Test No. 286; 10-1 being the first page and 10-2 being the second page of said report.)

I did not find any nux vomica in Koke syrup. I do not recall what the tannin reaction of this syrup was when treated with iron chloride. I know it didn't—I know it was different from Coco tannin. No, I don't remember whether or it had the same tannin reaction as Exhibit No. 131 in this case, or as any of the other exhibits. The same applies to the lead acetate test and to the cinchonine sulphate and the gellatine test. You say, suppose a syrup had a specific gravity of 1.253, a caffeine content of .14% and phosphoric content of .19%, and tannin reaction differing from that of Coca-Cola syrup and that it was mixed with Coca-Cola syrup, and you ask if I could tell you what the specific gravity of the mixture would be, and the test phosphoric acid, the caffeine content and its tannin reaction; well, if the syrup was freshly made syrup, the specific gravity wouldn't change any—that is equal parts of the two, I suppose. You say you don't know whether it is equal parts of the two or not, that all you know is that it is a mixture, well if it freshly made Coca-Cola syrup, the specific gravity wouldn't be changed. A variation of the other ingredients would depend upon



(Deposition of Dr. H. C. Fuller.)

the per cent of admixture, and the same in relation to the tannin test, weaker or stronger, depending upon the mixture. No, if I found a syrup that had a tannin reaction that was similar to the tannin reaction of Coca-Cola syrup, but weaker, that analysis would not necessarily indicate to my mind that the product [1805] had some Coca-Cola syrup in it. The mixture of the product mentioned, with a specific gravity, caffeine, and phosphoric content, etc., as above mentioned, with Coca-Cola syrup, the caffeine content of that mixed syrup would be less than the caffeine content of Coca-Cola syrup, and the same with the phosphoric acid content. Now, if the syrup which was mixed with the Coca-Cola syrup had a higher specific gravity than Coca-Cola syrup and a much less caffeine content, and about the same phosphoric acid content, your finished product would have a lower caffeine content than Coca-Cola, but I couldn't tell what the specific gravity would be, because I don't what the admixture would be. So that is as far as I can answer your question. The specific gravity of the syrup would be higher than the specific gravity of the Coca-Cola syrup if you mixed a syrup with a very high specific gravity with the Coca-Cola syrup, for instance, if a syrup had a specific gravity of 1.298, it would be higher than Coca-Cola. If I mix two tannins together that had a different reaction with the iron chloride and lead scitrate tests, it is difficult to say what would be the reaction that that mixture of tannins would yield; with lead

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you would get a combined reaction of the two, I think it would be quite characteristic. You would probably get an intensified iron reaction, at the same time, probably, and that is only a surmise, because I don't know what the tannin might be you would put in there. I have never made a test of that kind. I said Plaintiff Exhibit No. 134 is Coca-Cola syrup probably. I am practically certain that it is Coca-Cola syrup; I couldn't say that it was not, by any test that I [1806] know of. I think I would be willing to swear absolutely positively that it is Coca-Cola syrup. I said Plaintiff Exhibit 135 was a mixture of Coca-Cola syrup and some other syrup. I determined that it was such a mixture just from the general appearance; it is not Coca-Cola straight. It has some characteristics which suggest Coca-Cola, but it is simply an opinion that I arrived at from what I saw of it, that it was probably a mixture. You asked if it is not more of a guess on my part than anything else; well, it is more than a guess. It is my opinion that it probably is. No, I did not determine the relative proportion of Coca-Cola syrup in this mixture, or the relative proportion of the other syrup. You ask if I determined it was a mixture by its specific gravity—no, it is more—as I say, it is a sort of feeling that I have—after analyzing a great many of these things you can sometimes tell—it may be second nature—call it what you will. You ask if *it more* instinct than anything else; well, after you have taken into consideration the figures you

(Deposition of Dr. H. C. Fuller.)

have obtained the appearance of it, the way it looks and everything, whether it is a mixture or whether it is not. This Exhibit 135 looks different from what I have analyzed. It is different from a great many of the other exhibits in this case. There have been a lot of exhibits introduced in this case that were fermented. Oh, no, I didn't say that all the exhibits introduced in this case have been fermented except this one; I said a great many of them have been. You say that I have mentioned three exhibits that were fermented, and that there are eleven exhibits altogether. You ask how the color of this Exhibit 135 differed from the color of the [1807] exhibits that were not fermented; well, I don't know that I can say. You ask if it differed at all; yes, sir, it did in some respects, but I don't remember how. No, I could not tell just now by looking at this Exhibit 135 and the other exhibits whether it differs or not. You ask why I cannot now, if I could tell at some time previous; well, because in determining the difference in color, I take it and dilute it under certain conditions and compare the color with normal Coca-Cola syrup. The sample that I test is diluted with water. I put ten cubic centimeters of syrup and add forty cubic centimeters of water and compare the color in a tube, with ten cubic centimeters of Coca-Cola syrup, to which I have added forty cubic centimeters of water. When that is done, you pretty often get wide variations. Yes, sir, I have analyzed very many samples of Coca-Cola at the



(Deposition of Dr. H. C. Fuller.)

same time and compared them with each other and tested them for that color. I don't know, I am sure, how many samples of Coca-Cola syrup I have done that with, at one time. You ask if I can give you an idea, and if it was as many as one hundred at a time; oh, no, well I suppose about as many as ten at a time. Yes, sir, they all have exactly the same color. I can tell that fact by the difference in coloring appearance, when the two products are diluted with the same quantity of water, because one product has more coloring matter than the other. The same kind of coloring matter ought to give the same color if it is in fact the same kind. You ask if there are more than one kind of caromel coloring. I presume there are different sources, they may differ some—I know it will vary in Coca-Cola. Oh, yes; I have analyzed Coca-Cola for the caromel coloring in there. I don't know what per cent of [1808] Coca-Cola syrup the caromel coloring is, because I have never analyzed it quantitatively. There is no way to do that. I did not say I determined the amount of caromel. I said I determined the comparatively pictorial value—if one syrup is lighter or darker than the other—it is easily to be discovered by the method I have described, but there is no measure of this pictorial appearance. With the naked eye you could not discover the difference just by looking at it, a thick syrup. I tested the exhibit 135 with Coca-Cola syrup to see if it had the same color, and it did. I did not compare it however, with the other exhibits

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in this case. If Coca-Cola syrup were mixed with some other syrup you ask if the color of that mixture would be the same as the color of Coca-Cola, or if the syrup that was added to it which was not Coca-Cola would have any effect on the coloring; it would depend on how much coloring there was in the other syrup originally. Oh, no, even if you got the same color, that would not be an absolute infallible criterion by which to determine whether or not the syrup was in fact Coca-Cola syrup. If that syrup had a specific gravity of 1.2714, that fact would not be any indication whatever that the syrup was a mixture in which Coca-Cola had been placed. No one test alone is sufficient to form any criterion; you have to get them all, and then when you get them out once, you cannot draw any conclusion. No, if a syrup contains .17% caffein, that would not be any indication that it had Coca-Cola in it, and the same would be true if it contained .21% phosphoric acid. If the syrup had a specific gravity of 1.2714, caffein content of .17%; phosphoric acid content .21%; those facts [1809] combined and considered together would not mean anything—it would not mean that it was not straight Coca-Cola, and that is all I am interested in in this case—whether it is straight Coca-Cola or not. Sometimes I go further and give an opinion as I did in this case, that it was probably a mixture. I don't say that it is a mixture. I say it is probably a mixture. You say that the reason why you ask me is because you understood me to say

(Deposition of Dr. H. C. Fuller.)

on my direct examination, without any qualification whatever, in answer to Mr. Hirsch's question that Exhibit 113 was in fact a mixture of Coca-Cola syrup with some other syrup; well, I may have said so, but it is probably a mixture. You ask if I mean to say that it could be and if that is about as far as I can go; my opinion is that it is probably a mixture. You ask if the only thing on which I base that opinion is this instinct I have and the fact that it give a very slight tannin reaction similar to Coca-Cola tannin reaction; no, I base it on my complete analyses and my experience with soft drinks added to my intuition about it as you express it, but not to any one of these features. Oh, no; I have not analyzed all of the cola drinks on the market. It is quite possible that there could be a cola drink which would respond to all the tests I have made on Exhibit 135 and yet has no Coca-Cola syrup in it. I couldn't say whether or or not I recall ever having analyzed the syrup that responded to the same test as Exhibit No. 135 responded to identically. I have had lots of instances where there was a mixture of Coca-Cola syrup with some other syrup. The particular analysis of the sample in hand compared with Coca-Cola was what caused me to reach that conclusion [1810] or that suspicion, or whatever you wish to term it. You say about the only difference you can see between this analysis of Exhibit 135 and some of the other exhibits except for slight variation, is the fact the Exhibit 135 yielded a very slight tannin reaction



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that was similar to Coca-Cola, whereas the others didn't; well, this one has a different specific gravity from any of the others, except the one from Nashville (referring to Fried & Haas sample). You ask if a combination of the specific gravity, caffen content, phosphoric acid content—those three things combined—of Exhibit 135 lead me to conclude that it was a mixture of Coca-Cola syrup and some other syrup; they would indicate that combined them in that test, but not by themselves, necessarily they wouldn't indicate anything, that is what I repeated about a dozen times in this record, in two or three tests does not mean anything in this work. You ask if these three tests, specific gravity, caffen, phosphoric acid combined with this slight tannin reaction that was similar to Coca-Cola reaction, if those four tests would indicate anything they wouldn't mean anything unless I had the full data before me. You say supposing the specific gravity, caffen content, phosphoric acid content and the tannin reaction of the syrup was similar in all those respects to Exhibit 131 and the color test indicated that the syrup had the same coloring as Coca-Cola, but the syrup did not have flavor, taste or aroma of Coca-Cola syrup, could I say from that, with any degree of certainty, that that syrup was a mixture with Coca-Cola syrup; it might be a mixture. You ask if any of these exhibits in this case might not be a mixture with [1811] Coca-Cola syrup; no, sir; they couldn't be mixtures—that is what I tried to testify to all

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through, that some were not, but that this one probably was. You ask if Exhibit 133 could be a mixture with Coca-Cola syrup or something else; I can say right now that none of these are mixtures of Coca-Cola syrup—135 is the only one in that list that might be a mixture. If any one of these tests I have mentioned for Exhibit 135, to wit, specific gravity, caffein content, phosphoric acid content, reaction content, flavor and odor and color test. If any of those tests was omitted I don't know whether or not I would be able to say that that Exhibit was a mixture with Coca-Cola of some other syrup, with as much certainty as I now say it. I don't know whether or not I found any prune juice in the sample of Koke syrup that I analyzed. I didn't test for it. Tannin has flavoring properties, it might be termed a flavoring agent, it certainly adds to the blend of this product in a very pleasing way; yes, sir, caffein has a taste, it is bitter. I don't know whether or not it adds any taste to a drink of this sort, I doubt it. I don't think it affects the taste one way or the other, nor do I think it would modify the taste. If a drink which was made up in exactly the same way that Coca-Cola is made with all the other ingredients in it, and had caffein in it in the proportion that it is in Coca-Cola syrup, as compared with a drink made up identically the same way, and without any caffein in it at all, I don't think there would be any difference between the two samples in taste.

Cross-question 1192. "What function does caffein perform in Coca-Cola syrup? [1812]

(Deposition of Dr. H. C. Fuller.)

Mr. HIRSCH.—“I object to that particular question, on the ground that it is not based on any direct examination of this witness; second that this witness has not qualified as a physiological chemist, or qualified in any way by which he could possibly answer that question, as to what effect the caffein would have in its presence, and I move the question be stricken, and the answer if any be forthcoming, be stricken. (Overruled. Exception.)

Cross-question 1194.—“What is the answer?

A. “I don’t know.”

I am not qualified to make any answer about the use of caffein. You say then that so far as I know it does not perform any important function in the drink; I don’t know anything about its use in Coca-Cola syrup. You ask if the specific gravity of a material like Coca-Cola syrup would make any difference in flavor or odor of the syrup, and you ask if there would be any difference in flavor between syrup with a specific gravity of 1.257 and one with specific gravity of 1.2471. Well, now, I have got three, I have 1.27, and one 1.25, and one 1.24—question if there would be any marked difference there, I don’t know whether you would get any difference. If you had a greater difference than that in the specific gravity you might see a difference in the sweetness of the syrups. The material difference in phosphoric content between two syrups would effect the tartness, astringency, you might say to the mouth. No, it does not produce the same results as highly carbonated water would when added to the syrup.



(Deposition of Dr. H. C. Fuller.)

It would produce a kind of acid biting taste, tartness, is the best expression I can give to it. If you were to take coca leaves, get them in [1812½] bales, grind them in a mill and then take cola nuts and mix them with the ground coco leaves in a percolator, wet them down with phosphate of lime until they were thoroughly weathered, then pack them in this percolator and let them stand about twenty four hours, then put on them dilute alcohol, to which a white California wine has been added and percolate the mixture with that dilute alcohol and white California wine, you would get out of that mixture all the extractive matter in the cola nut and coco leaves that would be soluble in alcohol of the strength used. If you use twenty per cent alcohol and the coco leaves were the ordinary erythroxylon coco, you would get from the coco leaves cocaine and the light alkaloid, tannin, and probably a little chlorophyl and any mineral matter that was present soluble in the alcohol mixture, and possibly a little protein matter. From the cola nut you would get caffen, a quantity of theobormine, sugar, coloring matter, protein material and get soluble mineral substances that are in the product. I may have omitted something, but I think those are the essential ingredients. The percentage of the dilution of alcohol would materially affect what was extracted. If you had a strong alcohol, you would get more chlorophyl from the coco leaves, and if you had a weaker alcohol, you would get more gum from the cola. I think that would be about the only difference. I don't know of any

(Deposition of Dr. H. C. Fuller.)

flavor that chlorophyl has, it is not a flavoring agent. You ask what is the mineral matter that I speak of that comes out of the coco leaves; well, any vegetable substance contains small quantities of inorganic salts, mineral matter, some containing [1813] calcium oxybate—that is quite a common constituent, a material, in plant material and phosphate. You ask what different varieties of phosphate; I speak of a phosphate present, probably alkaline and alkaline earth phosphates, and there is usually a little passive nitrate even in plants. I don't say these things all occur in those cases, I say they are present in some plants; and then that mineral matter might be. I do not know specifically what mineral matter would come out. You ask if cocaine has any taste. I don't know whether you would describe it as a taste, it has a marked physiological action on the organs of taste, produces an anesthesia, I wouldn't call it exactly a taste though. It would not impart a flavor to anything to which it had been added. It certainly would modify the taste if there was enough of it present—it would produce an anesthesia which would have a modifying action on any taste. I am not certain whether the same is true of the other alkaloids in the coco leaves or not. None of the other alkaloids in the coco leaf has any flavor, but I am not so sure about the anesthetic power. You ask what is protein matter that I speak of; all vegetable materials containing nitrogenous substances; which are known chemically as proteins—they are analogous to substances which you get from the extract of beef.

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You ask if these substances are not there in very minute traces. I don't know what percentage they are in. I have never tried to determine quantitatively how much of that protein matter, or of these mineral matters there are in the coco leaves. You ask if the text books do not state that it is in such small quantities that it defies [1814] the analyses of chemistry; not that I am familiar with at all, I don't know it if they do. I cannot recall any text books now that attempt to give the quantity of the protein and mineral matter in the coco leaf. You ask is for all practical purposes that have been found so far, this protein matter and mineral matter found in coco leaves is not practical material, and that if it is not present in the leaf in such minute quantities that it does not affect the coco leaf one way or the other; I never heard of its use for any purpose, but as I said before, I don't know whether it is minute or not. I don't know that I would call them inert substances. It would be pretty hard to define just what is an inert substance—pretty hard to give a definition that would cover everything; I speak of an inert substance as one that does not respond to treatment with ordinary chemical reagents, and has very little action of itself on anything. Neither the flavor nor aroma of fluid extract of coco material would be changed or modified by the absence of that protein or mineral matter from the fluid extract of coco. The only thing obtained from the coco leaf, and which is present in this extract that we have been speaking of—extracted in the manner heretofore



(Deposition of Dr. H. C. Fuller.)

outlined—that really has got a flavor, or that really tends to flavor, anything in which it is put, would be the tannin. I said a while ago, I did not think that caffein would add to the taste. I don't remember now the quantity of theobromine in the cola nut, I wouldn't say offhand. You ask if it is not a minute trace; it is very small. Theobromine is not a flavoring agent. I do not know the quantity of sugar in the cola nut. [1815] I don't know what the coloring matter is in the cola nut which I spoke of a while ago. The protein material in the cola nut is probably more or less similar in character to the protein material which I spoke of as being in the coco leaf, but the same is true with respect to the soluble mineral substances in the cola nut. You ask if the only flavoring agent in the extracts that have been talked about obtained from the cola nut is sugar. I don't know much about the flavors from cola. I am not qualified to express an opinion about it. In syrup like Coca-Cola syrup and the class of syrups that have been talked about, a variance in the analytical elements obtained by analyzing these syrups could be accounted for, very probably by varying conditions under which the products were made, but a syrup mixed by the same formula, although by a different person in a different locality, should not yield a different analytical result. I don't know of any case where it does. I don't know whether or not the human equation makes any difference in the mixing of syrups, I am not a soda water manufacturer. Theoretically I don't think a small batch of coca-

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cola syrup made in small quantities by the coca-cola syrup ought to differ in any respect from a large batch of coca-cola syrup made by the same formula, but practically I don't know anything about it, because I have never known that to be done. The tannin of the coco leaf would impart a flavor to Coca-Cola syrup—it would add to the blend very materially. You ask if I know whether or not the tannin from the cola nut would have any effect on the flavor of Coca-Cola syrup; I have said several times I [1816] don't know anything about the tannin from the cola nut. I have never seen merchandise No. 5 manufactured. I don't know the process by which it is made. I have heard it repeated, but I don't know it. I couldn't tell you what it was, I guess I don't know. Yes, sir; I have analyzed some samples of merchandise No. 5—that is, the merchandise No. 5 that forms the ingredients of Coca-Cola syrup, I suppose. It was when the Government cases were being worked up, and the samples were being obtained from the different factories and sent in—they were reported to be merchandise No. 5. I had no reason to doubt that they were the genuine article. I have also tested merchandise No. 5 since I left the Government. I employed the same methods for testing after I left the Government service that I did when I was employed by the Government. You ask if I obtained the same results. Well, I don't know what you mean, because I have been, I have always tested it the same way. Since I left the Government I have tested for its general

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composition, for the ingredients in it,—for the presence of extracts of coco and cola and that is all. I don't know how many times I tested while with the Government, but it was several times. You ask if I have obtained the same results on each of those tests; well, as I say, I have analyzed it for different things at different times, and it has always shown the same general characteristics. You ask if I found any extract of coco in merchandise No. 5; in any of the analyses I made of it; I have—that is, deconized coco, not the straight coco leaves it come on the market. You ask what principle of the coca leaf I found in merchandise No. 5; well, tannin, that was all I tested it for. [1817] You ask if that is all I have ever tested it for; well, I tested it when with the Government for chlorophyl. I did not find any chlorophyl in it. When I was with the Government I also tested it for cola. I performed several experiments with merchandise No. 5 and tested it to see whether or not it had the characteristic flavor of extract of coco leaves. You ask if I detected any aroma characteristic of the coco leaf in merchandise No. 5; I don't know exactly what you mean. The aroma of the coco leaf does not mean very much, of course, all leaves have an odor which you may call aroma. Merchandise No. 5 is a blend and the odor of any one of the ingredients is not prominent. You ask if I detected, so I would know it, the presence of any flavor in merchandise No. 5 that was characteristic of the coco leaf, or of the extract of coco. I don't think so. You ask if I mean that I did not



(Deposition of Dr. H. C. Fuller.)

detect it; I could not detect coco leaf by odor alone, that is impossible. No, I could not detect coco leaves by odor alone. You ask if coco leaf has a characteristic odor; it has an odor that is characteristic of leaves; but other leaves have very similar odors, so I would not want to take a bag of leaves and smell it and say it was coco leaves. I don't know what other leaves smell similar to coco leaves; I cannot say about that; lots of leaves of different kinds. I don't know whether or not oak leaves do. Yes, sir; I have smelled the extract of coco leaves, and I have compared the smell of merchandise No. 5 with the smell of extract of coco leaves. I don't remember whether I detected any smell in merchandise No. 5 similar to the smell of extract of coco leaves. Those tests were performed so long ago I [1818] have forgotten. Yes, sir; I expect I did tell the truth about that in my testimony in Chattanooga in the case of United States against Forty Barrels and Twenty Kegs of Coca-Cola. You ask if I have ever been able in any of my analyses of merchandise No. 5 to determine the presence of any of the properties of the coco leaf, except the tannin; yes, sir; I have found traces of chlorophyll, some, that is, very slight traces. Oh, no; that chlorophyll was not characteristic but chlorophyll in the coco leaves, it was just a characteristic of the leaves; indicative that you have a leaf presence is all. I don't think that I have ever compared the test of merchandise No. 5 with the test of white California wine alone. I don't remember of doing it. Whatever I testified

(Deposition of Dr. H. C. Fuller.)

on that in Chattanooga was the truth, but I never testified that I compared the flavor of merchandise No. 5 with white wine, I know that. Aside from the chlorophyl which is not at all characteristic of the coco leaf, and this tannin, I was never able to discover any other property of the coco leaf in merchandise No. 5. The property of the cola nut which I found in merchandise No. 5 was caffenin. I did not find anything else. I might say I never tested them for anything else. The fact is that answer you made me say was not a fair answer, because I never tested for anything else. I simply analyzed merchandise No. 5 for the presence of caffenin, that is with respect to coco content, and was not interested in anything else, as caffenin was the only thing I had under consideration, that is when I was investigating it to determine the cola nut content. Yes, sir; I determined [1819] the quantity of caffenin in merchandise No. 5, but I do not recall what it was. No, I have never determined the quantity of tannin in merchandise No. 5. I determined that tannin in merchandise No. 5 was coco tannin, instead of cola tannin, because I compared it with cola tannin and it answered the same reaction. You ask if I had ever submitted cola tannin to the same test; I made some very meager tests with something I got out of cola, which may or may not have been tannin; the results I got were absolutely of no importance now, because of later results which I made, which show conclusively that the tannin reaction substances of merchandise No. 5 was the same as the tannin that

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you get from coco leaves. You say, yes; but that you were asking me if I ever tested the tannin of the cola nut to determine whether or not that responded to the same test as the tannin of the coco leaf, and in the same way; I never have tested the tannin, any tannin from the cola nut. As I said before, I am not sure there is any such thing. You ask if I am able to state definitely and certainly that the tannin which I discovered in merchandise No. 5 was necessarily the tannin of the coco leaf and not the tannin of the cola nut; I am absolutely positive that it was the tannin of the coca leaf. You ask if I have always entertained that opinion; I have, ever since I knew anything about it. I first learned about it at Chattanooga. You ask if I knew nothing about it then; I did know something about it, but not as much as I have learned since. What I said then I believed, but I can learn a great deal in five years over what I learned then. [1820] If I had sit still all the time until this time, I would not be here, probably. You ask if I am willing to state definitely that no other tannin but coco tannin will respond to those same reactions. I have analyzed a good many and have never found any that did. You ask which one of these four tests—the iron chloride, the lead acetate the cinchonine sulphate, or the gelatin—was the test to which none of the other tannins which I have tested responded the same as the coco tannin; well, all of them. You ask if I mean that I have never found any tannin of any kind of character at any time that responded to any one of these four



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tests the same way as coco tannin; I do not say that at all. I said there was no tannin that responds to all four of them the same way that coca tannin does. I don't know, I am sure, whether or not there are any other tannins that respond to the iron chloride test the same as the coco tannin. I don't think there are other tannins that respond to the lead acetate test the same as coca tannin, not that I know of. In so far as I know there are no other tannins that respond to the cinchonine sulphate test the same way that coco tannin does, and the same is true with respect to gelatin test. You say then that if you understand me correctly, I don't know of any other tannin that responds to any one of these four tests the same way that coco tannin does; I never said anything of the kind. I said I know of no tannin that answers all four tests the same way as coco tannin does. There are tannins that will react with iron chloride, that may not react the same with lead acetate; with lead acetate they might act differently than the cinchonine [1821] sulphate and gelatin, but there are no tannins that I know of, or ever have been reported that respond to those four tests the same as coco tannin. There is no tannin so far as I know, or anybody else knows, who has reported, that has answered those four tests in the same way, other than the tannin from coco leaves. But there are other tannins that will react with some of these tests, the same way that coco tannin does. I don't know whether there are here or not, any other tannin that will react the same as coco tannin when

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treated with iron chloride; or that it will react differently with gelatin, cinchonine sulphate, or lead acetate, or one or the other of them. The same with the lead acetate. They may react the same with lead acetate but act differently with the cinchonine sulphate. I know that because I know. You ask if I have ever determined that; I have either determined it or have gotten it from the test books. Allen's Scientific Chemistry is one, but there are plenty of others you can refer to. I presume there are some tannins that will react the same as coco tannin, when treated with lead acetate, but if there are they don't act the same way with iron chloride or with other reagents, and therefore, don't always react like coco tannin. You say that I "presume" and you ask if I know, as a matter of fact, that there are such tannins; I don't know. The same applies to the first test and to the other tests; there is no reaction at all with coco tannin when treated with cinchonine sulphate test. Lots of tannins do give a precipitate with it, and that is why I made that test. But there is no reaction when coco tannin is treated with gelatin, but there are very [1822] few tannins that do not. In fact, I don't know of any that have been reported other than coco tannin that do not give that precipitate. You ask if I recall whether or not in my analyses of Koke syrup if I applied this tannin test to Koke syrup. Let me see the report; "very slight tannin reaction." I probably tested it for the iron and lead, and got either nothing or very nearly negative results, and went no further with it. The

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reaction is so positive when you have got it there, that if you get negative or nearly negative test, you don't need to go further. I do not know of any tannin that will not react at all when treated with gelatin, and I do not recall any now which do not react when treated with cinchonine, except the coco tannin. Yes, sir; I have submitted the tannin of tea to that test. It was very different from coco tannin, and as I recall it, gave a precipitate in tests with both of those other reagents. I am very sure about the precipitate with gelatin. You ask how I determine the presence of chlorophyll in merchandise No. 5; I was not looking for it specially. I just observed it on a filter I was handling, that was all; a greenish characteristic appearance of chlorophyll I went no further with it. You ask if in my opinion it is possible for a human being, even with a very highly developed sense of smell or taste, to detect the characteristic odor or flavor of coco leaves in merchandise No. 5; well, I don't know. You see they have a blend there in merchandise No. 5. There is no any one ingredient that is prominent over the other. Whether anybody could or not, I don't know, I cannot. You ask if it would be possible for any one, no matter how highly their sense of [1823] taste or smell might be developed, to determine the characteristic odor of any taste characteristic to the coco leaf, or extract of cola in the completed Coca-Cola syrup, if fifteen or sixteen gallons of merchandise No. 5 were used as an ingredient in making 1250 gallons of coca-cola syrup. I cannot speak for any-



(Deposition of Dr. H. C. Fuller.)

one else. The flavor and odor of merchandise No. 5 would be greatly diluted and weakened, but it would have, unquestionably, a blending effect on the whole flavor. The whole question of flavor is very intricate and unless a man is experienced and has spent his life testing and comparing flavors, it is very difficult for one to say much or anything about it. The personal equation often enters largely into the detection of flavor. One man might line up a row of coffees on a table, and pick out the country and even the port from which the coffee came. Another man can do the same with tea. I have a friend who can pick out different countries from which tea came, just by tasting them. So, it is very possible that some one, with a very highly developed sense of taste could detect the flavor of coco. You ask if I mean that he could do that in the completed syrup; well, I don't know. You ask if it is not true that I made an analysis or test of merchandise No. 5, and of California wine as to flavor, and if it is not true that I found absolutely no difference between the two; I never made any such statement. You ask if it is not true that I made a test of the solids of merchandise No. 5; yes, sir; I have once gone on record about that somewhere. The best evidence of that is the record. I don't know what I testified about now, whether two per cent or not. You ask whether or not [1824] it is a fact that extract of coco and cola which forms only two per cent of merchandise No. 5, would impart any appreciable flavor, taste or aroma to coca-cola syrup; it would unquestionably

(Deposition of Dr. H. C. Fuller.)

act as a blend, and the blend would produce the very pleasant flavor that Coca-Cola has. Just how appreciable this would be is some thing I cannot say. It is a fact that there is a flavor to this two per cent. I want to say that I think your question is an unfair one, because that residue you speak of as two per cent is not merchandise No. 5 at all. It is the solid extract that is filtered out from merchandise No. 5; The aroma of the wine and other things that might have been there have been dissipated. There is a flavor of coco leaf in merchandise No. 5, a flavor due to the tannin. You ask if it is not a fact that I tested Coca-Cola syrup and merchandise No. 5 and the coca extract to ascertain whether or not any flavor is imparted to Coca-Cola syrup by merchandise No. 5 or coco extract, and that this test resulted in my finding that there was no odor and no flavor imparted to Coca-Cola syrup thereby; I did not work with Coca-Cola syrup, and I deny that I made any such test as that purported to be put into the record there. I made a test, but they were made in an entirely different way, as the record will show. I am only familiar with the method by which the decoconized extract of Coca-Cola is obtained and put into merchandise No. 5 to make Coca-Cola syrup in a very hearsay manner. I have never seen it done. Toluol, an extract from coco leaf, alcohol and chlorophyl, and nothing else. Toulol would not extract from the coco leaf all of the flavoring matter. Toluol extracts [1825] the wax from the leaf. You ask if the treatment of the coco leaf by toluol

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and the subsequent cleaning process to which the leaves are subjected in the preparation of merchandise No. 5 or would the alleged extract from the coco leaf which goes into merchandise No. 5 does it not in fact remove the flavoring matter from the coco leaf; it does not. Yes, sir; I did make a sample of extract of coco leaf and that sample certainly did differ both in odor and flavor from merchandise No. 5, but as I have said merchandise No. 5 is not an extract of coco leaf; it is a blend, and a blend very seldom takes any characteristics of its components. You ask if I have not made a test, not only of coco tannin, but of cola tannin, with both gelatin and cinchonine, and if it is not a fact that in that test both the cola tannin and the coco tannin behaved exactly alike; I have reported such test, yes, sir, but I have since learned a good deal more about that, so those tests I made at Chattanooga really amount to nothing at the present time. Yes, sir; I did detect an odor of toluol in merchandise No. 5. You ask if it is not a fact that I analyzed some samples of Coca-Cola syrup and discovered therein a bumblebee, insect legs, dust, dirt, hay, straw and other matter; I think I have gone on record with some of those things. You ask if it is not a fact that I analyzed merchandise No. 5 for the caffein content, and discovered caffein content about 1.5 per cent; I never made any such statement; the record is absolutely wrong in that respect. Yes, sir; it is a fact that I did make analysis of Coca-Cola syrup to determine whether there was any theobromine present, and that I never found any



(Deposition of Dr. H. C. Fuller.)

theobromine therein. You ask if [1826] it is not a fact that there is no coco in Coca-Cola syrup; there is coco in Coca-Cola syrup. I have not seen the labels on the barrels of Coca-Cola in a long time. I saw the labels on those barrels at Chattanooga. I certainly did observe the pictures of leaves and nuts on those labels. They were coco leaves and cola nuts. Coco is a drug. Yes, sir; it is a fact that I analyzed Coca-Cola syrup to determine whether or not there was any chlorophyl in it, and that I found no chlorophyl therein. You ask if it is not a fact that in analyzing Coca-Cola syrup for the caffein, that the caffein therein was not in the form of the cola nut; I never made any such statement. You ask if it is not a fact that there are aromatic substances, oils, and things of that kind in merchandise No. 5; that is a broad question, I cannot answer it. You ask if the only volatile matter I ever found present in merchandise No. 5 was derived from coal tar, toluol; there were a great many other volatile substances present, namely, alcohol, water, and aroma from the wine. You ask if it is not a fact that I analyzed merchandise No. 5 for the extractive matter, and that the total extractive matter I found was four per cent; you ask me that question awhile ago, and asked if it was two per cent, and I told you I didn't know. I don't know whether it is four per cent either. I cannot answer that question because I don't know. Yes, sir, I testified in the case of the United States against Forty Barrels and Twenty Kegs of Coca-Cola in the United States Dis-

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trict Court at Chattanooga, Tennessee, in 1911, with respect to the caffeine content and specific gravity of three samples of Coca-Cola syrup which I had analyzed. You ask if I did not testify there as follows: [1827] (Page 130, of the Record:)

“Q. Well, give us the analysis of that one test, that gallon that came from the one test mixture No. 3966-B?

“A. You refer to caffeine?

“Q. Yes, sir.

“A. .15%.”

The book is the best evidence, I don't know. I am presented with copy of the transcript in that case to refresh my recollection therefrom; I state that that is correct, .15%. I was then asked:

“And that would be what proportion of the analysis of the mixture?” And I replied .92 grains per ounce. I was asked about another sample known as 3967-B and I answered in response to a similar question that it contained .17% caffeine and 1.02 per ounce of caffeine. I was then asked the same question with respect to another sample of Coca-Cola syrup which I had analyzed and which was known in that case as 3969-B and I answered that it contained 1.19 grains per ounce of caffeine. On page 19 of that record, I was asked if I had not filtered a sample of Coca-Cola syrup and found in that filtering of that product any foreign substances, and I answered that I had found no dissolved materials, a little straw and a material similar in nature, which looked like hay, and a part of a bumblebee, and a number of legs of insects

(Deposition of Dr. H. C. Fuller.)

and other extraneous matter which was apparently dust or dirt. You ask if on Pages 133 and 134 of that record I was not asked the following question, and if I did not make the following reply, to wit:

“Doctor, are you acquainted with the substance known [1828] as merchandise No. 5, which is used in the making of Coca-Cola syrup?

“A. Yes, sir.

“Q. I will ask you to state if it has any particular odor or smell?

“A. It has.

“Q. Have you or not analyzed merchandise No. 5?

“A. Yes, sir.

“Q. Now, what are the contents of merchandise No. 5; what *do you* analysis show?

“A. It is a liquid preparation, containing 16.1 of alcohol, a trifle over 4 per cent—4.12 actually of what is known as non-volatile material.

“Q. What is that?

“A. Non-volatile material is a portion of the substance which is not evaporated; that is, if you take a certain portion and evaporate a steam vat, there is a certain amount left which does not go off at a temperature of 100 degrees—the degree of volatile principle, which was not alcohol, because alcohol would be volatile matter, and the odor which was characteristic of this ingredient known as toluol.

“Q. What is toluol?

“A. Toluol is a liquid that is obtained in the distillation of coal tar; it is similar to benzoate.

“Q. State what it is you found in this merchandise



(Deposition of Dr. H. C. Fuller.)

No. 5 that has the peculiar flavor that causes you to recognize that?

“A. It is toluol. [1829]

“Q. Did you or not during either of the years 1908, 1909 or 1910, or just before that, find any caffeine in this merchandise No. 5?

“A. I did.

“Q. What amount?

“A. 1.601%.”

I have no doubt those questions were asked, but the replies are wrong in some instances. The word benzoate is not correct; it should be benzol. I never made any remarks about benzoate. The per cent of caffeine is not correct. Those are both very bad blunders. I don't think anything else there is incorrect. On page 141 of that record, I was asked if I had ever found any theobromine in that compound, referring to Coca-Cola syrup, and I answered, no, sir. On page 143, referring to the method by which I had determined the caffeine content of Coca-Cola syrup, which I have testified about, I was asked if there was any better method, to my knowledge; and I replied that there was not, and that answer was true at the time the analysis was made. You ask if there are any substances known as coco or cola under their own distinctive names; well, they are well-known drugs on the market, coco leaves and cola nuts. The word coca and cola are used synonymously among the drug merchants, used interchangeably. You ask if there is an article known as coco under its own distinctive name; it is known as coco leaf. You ask

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if there is an article known as cola under its own distinctive name; bear in mind those are known only among the people who deal in them. They are not known to the lay-public as such. I want to make myself clear. I am not going to give [1830] half an answer that are one-sided—

Mr. HIRSCH.—I object to the answer because it is entirely unresponsive to the question and because it is volunteered by the witness, and I move to strike it. Overruled. Exception.

Yes, sir; on page 145 of this record I am talking about I was asked whether or not there are such substances as coco and Cola known under their own distinctive names, and if I had samples of either of those. And I replied in answer to that question that I had. I was then asked the following two questions, and made the following two replies:

“Q. Are there such substances?

“A. There are.

“Q. Known under their own distinctive names?

“A. Yes, sir.”

I was again asked on Page 147 of the record, and replied as follows:

“Q. Did you ever hear of anybody buying or selling any coco leaves under the name coco?

“A. Yes, sir.

“Q. Who?

“A. Manufacturing pharmacists, drug brokers.

“Q. Well, did you ever hear of a man going into a store and asking for coco leaf, when he wanted coco leaf?

(Deposition of Dr. H. C. Fuller.)

“A. Yes, sir.”

On Page 154 of the record, I was asked the following question and made the following reply:

“Q. State whether or not you analyzed this coco mixture, the Coca Cola Syrup that you testified about yesterday, [1831] which was shipped from this seizure, and if you found any coco in it?

“A. I did not.”

On Page 155 of the record, I was asked and answered as follows:

“Q. Is there such a substance or product in there (referring to the United States Pharmacopea) as coco leaf, or anything treated under the head of coco leaf?

“A. No, sir.”

On pages 164 and 165 of that record, I was asked and answered as follows:

“Q. Doctor, what did you say about not finding any of the elements of coco leaf in this coco product?

“A. Do you mean of Coca-Cola?

“Q. Yes, sir.

“A. No, sir.

“Q. You mean now, that you did not find any cocaine in it?

“A. I did not find any cocaine or any chlorophyl.

“Q. You do not intend to say that there are any elements in that compound derived from coco leaf?

“A. Not what is known as coco, no, sir.

“Q. I did not ask you that; I asked you if you did not mean to state that there was no elements in that compound derived from coco leaf?



(Deposition of Dr. H. C. Fuller.)

“A. I was not able to find any.

“Q. Do you simply mean to say that you were not able to find it, or positively assert from the analysis you made as an expert that there are no elements of any compound derived from coco leaf? [1832]

“A. Not as it is known as coco.

“Q. I did not ask you a thing about what is known as coco. I wish you would kindly answer the question as I asked it. Do you intend to say as an expert, from the analysis that you made, that there are no elements in that compound derived from the coco leaf?

“A. No, sir.

“Q. Do you mean to say there are none, or that you cannot say.

“A. There were not any.

“Q. So if it is true that there are elements in that compound from coco leaf, you failed to find them from your analysis?

“A. There were not any.

“Q. You say there were none?

“A. No, sir.”

I was asked those questions by Mr. Sizer, of counsel for the Coca-Cola Company. He was cross-examining me. I have learned a lot about coco leaves, since that, that I did not know then. On page 635 of the record, I was asked and answered as follows:

“Q. Did you find in the examination of this Coca-Cola syrup which you examined and of which you furnished an analysis on the former examination, any chlorophyl?

(Deposition of Dr. H. C. Fuller.)

“A. No, sir.”

And again on the same page:

“Q. Do you recall whether or not you were asked as to whether there were any ingredients or constituents of coco in this mixture? [1833]

“A. In the syrup?

“Q. In Coca-Cola syrup?

“A. I was asked about cocaine and chlorophyl, I remember those particularly.

“Q. I ask you now to be clear if you found any other constituents of coco in this mixture?

“A. No, sir.”

On Page 636 and 637 of that record I was asked and answered as follows:

“Q. State whether or not you have examined merchandise No. 5 with a view to ascertaining whether or not there was any cola shown, and if so what percentage of cola you found.

“A. I stated that I found one one-hundredth of one per cent of caffen. Now, it was impossible for me to tell from the quantity of this material, whether it was in the form of extract of cola-nut or not. If you wish to assume that it was present as cola-nut, I can give you approximately the per cent of cola-nut that there would be.

“Q. What was it?

“A. In merchandise No. 5?

“Q. Yes, sir.

“A. About five-tenths of one per cent.”

On page 260 of that record I was asked and answered as follows:

(Deposition of Dr. H. C. Fuller.)

“Q. Dr. Fuller, state whether or not you have ever known or heard of any product being sold under the name of coca, or any yield of this drug from which the cola leaf—C-O-C-O—coca leaf is taken, being bought or sold in the [1834] United States under the name of coco, except the leaf?

“A. No, I know of no other article.”

On page 639 of the record I was asked, the following questions and made the following replies:

“Q. Now, you say, Doctor, you do not find any cocaine or chlorophyl in merchandise No. 5?

“A. No, sir.

“Q. You did find, I believe you stated, in your former examination certain aromatic substances, oils and things of that kind?

“A. No, sir; that is not Coca-Cola.

“Q. Did you find any of these in merchandise No. 5?     A. No.

“Q. Did you find any volatile matter?

“A. Yes, sir.

“Q. Do you know what these volatile matters were derived from?     A. Yes, sir.

“Q. From what?     A. Coal tar.

“Q. That is the scent of toluol that you referred to?     A. Yes, sir.

“Q. So that the only volatile matter you discovered was a trace in merchandise No. 5?

“A. No, sir.

“Q. What were the others?

“A. Alcohol and water. [1835]

“Q. Alcohol is not derived from coal tar?



(Deposition of Dr. H. C. Fuller.)

“A. No.

“Q. Were the alcohol and water the other volatile matters you discovered?     A. Yes, sir.

“Q. You did not find any other volatile matter except water, alcohol and this odor of toluol?

“A. That is all.

“Q. Did you try it for anything else?

“A. Yes, sir; I did.

On page 641 of the record, I was asked and answered as follows:

“Q. Explain the difference between extract of cola and pure caffeine.

“A. Well, extract of cola is a solution of the ingredients, or it may be a solution of all the ingredients obtained by extracting cola by alcohol and water, and glycerin is also used in obtaining extract of cola. That, of course, includes caffeine and a number of other ingredients, common matter, volatile and other substances. Now, caffeine is one of these constituents when it is obtained alone and purified it is not an extract of cola, which is identical with caffeine which is obtained from coffee, tea, durana.

“Q. There is a difference between extract and pure caffeine?     A. Yes, sir.

Recross-examination by Mr. SIZER.

“Q. You mean, as I understand you, that there was no extract in Coca-Cola syrup that contains all the ingredients [1836] that might be extracted from the cola-nut?     A. Yes, sir.

“Q. That was the only ingredient included caffeine which might have been extracted from the

(Deposition of Dr. H. C. Fuller.)

cola-nut?      A. Yes, sir.

No, I did not say that had all, they have this all balled up here. Where I said "or is identical with caffeine which is obtained from coffee" that should be "But is identical with caffeine which is obtained from coffee, tea, and guanaco." On page 1773 of the record, I made this statement:

"I am of the opinion that there is about 2% of tannin in the coco leaf, now, possibly it is a little more in huanaco variety than in the truxillo, but whether the percentage would be very much augmented, I am not prepared to state."

"Q. Can you state the amount of percentage of extracted matter that is found in Coca-Cola syrup made from merchandise No. 5, due to the use of coco and cola?      A. I can.

"Q. How can you state that, Doctor?

"A. I can state that because I have made an analysis of merchandise No. 5 to determine the total extractive matter. Knowing the total of the extractive matter that exists in California wine, and assuming that it was white California wine, which has been referred to by the other side, I can determine how much came from the coca and how much from the cola, and then by simply taking the preparation of merchandise No. 5 so mixed with the Coca-Cola syrup, it [1837] is a very simple matter to determine how much of the extractive from coca and cola would go into the Coca-Cola syrup.

"Q. Have you got a chart that would show that, that has been prepared by you as a basis, taking as

(Deposition of Dr. H. C. Fuller.)

the basis the analysis that was reported by Dr. Mallet, containing the total extractive of 4.25 in one syrup and 3.42 in another, and 3.85 in another?

“A. Yes, sir; I have such a chart.

“Q. You might explain that to the jury—the extractive matter in merchandise No. 5.

“A. The extractive matter in merchandise No. 5 was 4 per cent. Now, there are two per cent due to wine—that percentage has been worked out as the result of a large number of experiments on light-colored wine like California wine—and that would leave a balance of the extractive in that, the large amount, it would be due to the coca and cola. Now, knowing the volume of merchandise No. 5 it is a very simple thing to figure out how much of that percentage of that two per cent would be to coca and cola. Knowing that there are fifteen gallons of merchandise No. 5 put in the 1250 gallons of syrup, you of course, can at once figure how much of this would be due to coca and cola in that 1250 gallons.

“Q. What did you find that to be?

“A. 1.0185%, or one part in 5283.” [1838]

At the time I gave this testimony on Pages 1773 and 1774 of the record above referred to, I had then become acquainted with the four tests for tannin which had been detailed, prior to my testimony, by Drs. Mallet, Caspari, and Sadtler; namely, the tests of iron chloride, lead acetate, cinchonine sulphate, and gelatin.

On page 1774 of the same record, I was asked and answered as follows:



(Deposition of Dr. H. C. Fuller.)

“Q. Are you familiar with the reaction and reactive agents employed by Drs. Mallet, Caspari and Sadtler, as testified to by them, as applied to the tannins in coca and cola?

“A. I am.

“Q. I will ask you to state whether or not you have made any experiments with those reactive agents on Merchandise No. 5, during the progress of this trial, since the testimony of those three gentlemen or on coca and cola extracts, to determine as to the amount, action and behavior of the tannins in these respective mixtures?

“A. I worked with extract of coca and of cola.

“Q. What did you find with respect to the behavior of the tannins in coca and cola when the reactive agents, as indicated by the three witnesses referred to, were applied?

“A. You mean how did each reagent act?

“Q. Yes, how did the tannins behave, in other words?

“A. They behaved exactly alike.

“Q. Is it possible, in your opinion, to determine from the application of these reactive agents as to whether or not the tannin that is included in the mixture is [1839] exclusively that of cola, or exclusively that of coca, or whether a mixture of both?

“A. It is impossible.

On page 1776 of said record, I was asked and answered as follows:

“Q. Now, I will ask you to state whether or not you have had occasion to test the ‘Coca-Cola’ syrup

(Deposition of Dr. H. C. Fuller.)

as compared with Merchandise No. 5, and likewise, as compared with coca extract, to ascertain whether or not there is any flavor imparted to the 'Coca-Cola' syrup by either Merchandise No. 5 or coca extract?

"A. I have.

"Q. Is there or not any odor or flavor imparted thereby?

"A. There is not."

On page 177 of said record I was asked the following questions and made the following replies:

"Q. State whether or not, in your opinion, the use of the hydrocarbon that he used, which I understand to be toluol, would remove any of the tannin?

"A. No.

"Q. Would any other process through which he put that leaf remove any tannin, and if so, what?

"A. You mean before it was extracted with wine?

"Q. Before it became Merchandise No. 5?

"A. No, sir."

On page 1778 of said record I was asked the following questions and made the following replies:

"Q. Would or not any of the flavoring matter be removed" from the coca leaf in the process of extracting it by means of toluol, "and, if so, how and why, before it went into [1840] Merchandise No. 5?

"A. Yes, sir, they would all be removed.

"Q. Now, in what process?

"A. By the toluol and by the subsequent steaming process.

"Q. How does the steaming serve to remove the

(Deposition of Dr. H. C. Fuller.)

flavoring matter and odors?

“A. They are removed because they are volatile. That is the process used to remove the flavoring agents from a great many flowers, leaves and things.

“Q. Why would this toluol remove any of them?

“A. Because they are very soluble in oily mixtures of that kind.”

On the same page of said record I was asked the following questions and made the following replies:

“Q. Have you or not examined samples of Merchandise No. 5?

“A. I have.

“Q. State whether or not this particular extract of coca which you made up yourself resembles Merchandise No. 5 as to flavor or odor?

“A. It does not.”

On page 1779 of said record I was asked the following questions and made the following replies:

“Q. Is there any difference in flavor between the cola tannin and the coca tannin as respects the gelatin or conchonine?

“A. No, sir.

“Q. Is it possible, in your opinion, speaking from [1841] your observation and experiments with Merchandise No. 5 and with the extracts of cola and of coca, should you mix the tannins of cola and coca together to determine which is the more prominent in the mixture?

“A. No, sir, it would not be possible.

“Q. Tell why?

“A. They both react alike, and simply because



(Deposition of Dr. H. C. Fuller.)

you get a dark color signifies nothing at all.

“Q. Have you tried both of them?

“A. Yes, sir.

“Q. What color do you get from the tannin?

“A. You get a greenish black color.

“Q. Which is the darker of the two, if either?

“A. There is no difference if the concentration is the same.

“Q. State whether or not you have applied to the tannins of both coca and cola the reactive agents and the reaction processes as described by Drs. Mallet and Caspari?

“A. I have.

“Q. To what do you attribute the reddish brown color spoken of by Dr. Caspari as indicative of the reaction of cola,—which I believe he said he ascribed it to?

“A. I attribute it to the fact that he did not have any tannin there.”

On page 1780 of said record, I was asked the following questions and made the following replies:

“Q. Have you tried mixing Merchandise No. 5 with ‘Coca-Cola’ syrup to see whether or not any flavor is imparted to the syrup by the mixing of the Merchandise No. 5 [1842]

“A. No, sir, I have not,—not with ‘Coca Cola’ syrup.

“Q. I didn’t mean ‘Coca-Cola’ syrup, but syrup independent of the Merchandise No. 5, and then adding the Merchandise No. 5 to the simple syrup?

“A. Yes, sir, I have.

(Deposition of Dr. H. C. Fuller.)

“Q. State whether or not there is any taste imparted to the mixture after the Merchandise No. 5 is added.

“A. There is not.”

On the same page of said record, I was asked the following questions and made the following replies:

“Q. Did you receive from Howard Candler a statement as to the contents of this package of syrup that he made up by leaving out the Merchandise No. 5 that he shipped to Dr. Mallet from his factory as per his agreement on the witness-stand?

“A. I did.

“Q. Assuming that one gallon of the mixture in which Merchandise No. 5 was not added was made up, and that the mixture of ‘Coca-Cola’ syrup proper, which contained Merchandise No. 5, was taken from a 1250 gallon vat, would there, as to the flavoring oils and odors, be a difference even in batches of that size, independent of the Merchandise No. 5, and, if you say so, then tell why there would be?

“A. There would be.

“Q. Why do you say so?

“A. In the first place, one of these mixtures was 1250 times greater than the other, and it is a very difficult matter to adjust flavoring agents, and especially [1843] flavoring agents of the extreme potency of the oils that are used in this mixture in a small batch exactly to duplicate the test that you would get in a large mass. It is one of the most difficult things in pharmaceutical chemistry to do that.

(Deposition of Dr. H. C. Fuller.)

The error of adjustment is increased many times in a small mixture over a large mixture. It is a very difficult thing in even five gallon batches made up from the same formula to get exactly the same flavor. People can very often tell that. I have had that same experience myself. It is due to the essential oils.

“I will ask you to state, from a scientific standpoint and a practical one, as well, whether or not the methods of Dr. Mallet and Dr. Caspari were proper methods for determining the tannin in Merchandise No. 5, and in ‘Coca-Cola’ syrup, and if not, why not?”

“A. Do you mean getting them out for testing?”

“Q. I mean whether or not the test mentioned by them were true scientific methods for determining the flavor?”     “A. No, sir.

Q. Tell why, and in that respect speak of Dr. Sadtler as well, for determining the flavor?

“A. You mean the flavor of ‘Coca-Cola’ syrup?”

“Q. Yes, as compared with Merchandise No. 5?”

“A. No, sir, I do not consider them scientific.”

On page 1781 of said record I was asked and answered as follows:

“Q. Now, assuming that there was a slight difference in the predominance of the tannins of coca and cola in the [1844] ‘Coca-Cola,’ syrup or in Merchandise No. 5, would that slight difference or not impart any distinctive odor or flavor to the product?”

“A. It would not.

“Q. After the odor from the toluol, which you noticed first on opening a container of this Merchandise



(Deposition of Dr. H. C. Fuller.)

No. 5, is there any other distinctive odor present, and, if so, what is it?

“A. There is an aroma of wine, I should call it. That is about as distinct as I can describe it.”

You ask if on page 1784 of said record I was asked the following question, and if I made the following reply:

“Q. Did you find any difference between the flavor of California wine and of Merchandise No. 5?

“A. No, sir.”

I don't know what that means at all. I never was asked any such question in my remembrance. I might have answered that way, but I have no recollection of it. I am not qualified to say. You ask, if I did answer that way, was it the truth that I answered; I never made any tests, I don't know. I never made such a statement. You say it is in the book on page 1784; it may be in the book, I was not qualified to give any such testimony.

On page 1785 of said record, speaking of the two per cent of coca and cola extractive matter in Merchandise No. 5, I was asked the following questions and made the following replies: [1845]

“Q. Would or not two per cent impart a flavor to ‘Coca-Cola’ syrup?

“A. It would not.

“Q. Did you ever try it?

“A. There is no flavor in that.

“Q. No flavor at all?

“A. No flavor in that two per cent.

“Q. And no odor?

(Deposition of Dr. H. C. Fuller.)

“A. No, sir.

“Q. How do you know there is no flavoring matter and no odor?

“A. There is no flavor or odor of coca leaf in Merchandise No. 5.”

On page 1786 of said record, I was asked:

“Q. Is tannin a flavoring agent?

“A. No, sir, it is not.”

That refers, of course, to ordinary tannin; it does not refer to coca tannin at all. He did not know any more about tannin than I did at the time—that is, Mr. Miller, the man conducting the case for the Government. Yes, sir, there is a difference in flavor between coca tannin and other tannin. I explained that twenty-five times to-day at least. You say you don't recall that, that was ever brought up before; I went over that time and time again, as everybody else in the room will witness, and the record. I told you coca tannin differed from all other tannins. You say you are speaking about flavor; I testified about that, too. All this testimony I gave in the Chattanooga trial, I went over before [1846] in here, explaining how I have learned a great deal about tannin since then, and, as I just remarked, that question of Mr. Miller's does not mean anything because Miller did not know anything about tannin.

On page 1787 of said record, I was asked the following questions and made the following replies:

“Q. What two reagents, or what two agents, were there that Drs. Mallet and Casperi used that you say are common to all tannins as reagents?

(Deposition of Dr. H. C. Fuller.)

“A. The iron chloride, and the ferricyanide of potassium and ammonia.

“Q. What are two that are common? These three were applied to those distinctive tests, but what were the two that were common, or did I misunderstand? Did you say there were three that were common and two uncommon?

“A. I think I stated that the iron chloride, and the gelatin and the cinchonine sulphate test were common to both cola and coca, and I think I further stated that the ferricyanide of potassium and ammonia test were given by tannins generally?”

On page 136 of said record, I was asked the following question concerning those three samples of ‘Coca-Cola’ syrup which I analyzed, and which I was specifically asked about concerning their caffeine content, and I made the following reply:

“Q. In this connection tell us what the specific gravity was?

“A. The specific gravity in the case of sample [1847] 3966-B at twenty degrees centigrade was 1.2885; 3967-B same temperature 1.2518; 3968-B at the same temperature 1.2471.”

(The cross-examination of Dr. H. C. Fuller was resumed in Atlanta, Georgia, June 24th, 1916, as follows:)

Cross-examination (Resumed) by Mr. LITTLETON.

On page 1772 of said record, I was asked concerning the two varieties of tannins, and I answered as follows:



(Deposition of Dr. H. C. Fuller.)

“A. Well, I should say there was about ten times as much tannin in the cola as there is in the coca.”

I was sworn in that case to tell the truth, the whole truth, and nothing but the truth, and I was endeavoring to do that to the best of my ability, as far as I knew at that time. I was not trying to conceal anything, not a bit. I was not trying to tell half truths or convey wrong impressions. I was simply trying to tell things I knew of at that time. As far as tannins of coca and cola were concerned, I knew practically nothing except what has been told. I became connected with the Institute of Industrial Research through my own influence and nobody else's. Dr. Caspari and Dr. Wesener had absolutely nothing to do with it. I have never worked with them either before or since the trial at Chattanooga. I have never had anything to do with either of them. We have been associated together on cases, but have never done any work together. We never have discussed their methods of performing these experiments at all. The test for a single sample, to determine whether or not a syrup is “Coca-Cola” syrup or some other syrup, runs over two days for any one sample. I make various tests, either simultaneously [1848] or one after the other, whichever is most convenient. I usually start up all of my tests about the same time. For instance, take Exhibit 131 as an illustration: The tests for caffeine content, specify gravity, the phosphoric acid content and tannin reactions—could be all going on at the same time, and I usually do that. I presume

(Deposition of Dr. H. C. Fuller.)

I have performed about fifteen hundred tests on samples of syrup of this character at one time and another. I really don't know how many I have performed since I left the Government service. You ask if that has been the bulk of my experience with them; that is just a general guess, I don't know. I know I have made a good many and maybe a few more or maybe less, I don't know. I give my undivided attention to these tests while they are being performed. I performed tests on more than one sample at a time. The highest number that I perform at the same time depends on how many I have to do. You ask if I could perform, say, ten tests all at once. No, I don't do ten at a time, that is too many to handle. The Coca-Cola Company pays for each piece of work as it send it in,—that is, their attorneys do. You ask if I have a standing arrangement whereby they send these samples to me constantly, and pay me for analyzing them. I have no arrangement with them at all, no understanding as to the compensation to be paid, absolutely nothing. You ask if they have never inquired as to what I charged for services; I have never had a controversy over the payment. I think in one case they asked what it would cost, and I told them what I would do it for, and that is the only time they have made any inquiry over a bill. You ask if I have advised with [1849] and consulted with the attorneys for the Coca-Cola Company with respect to the chemical side of the evidence in this case, or if I have ever discussed with them the points which, if impressed and

(Deposition of Dr. H. C. Fuller.)

brought out, 'would be beneficial to the case; that I don't know, because I don't know what is considered beneficial in the case. I can say that my testimony was concerning a number of samples which were not "Coca-Cola"—that was the object of my entrance into this case, and that is the only thing we ever discussed—the composition of those. What they consider essential, I don't know, because we never discussed it. I don't know how the work which I do for the Coca-Cola Company, or their attorneys—the volume of it and the compensation therefor—compares with the rest of the work I do, and the compensation therefor. I don't know whether or not it is a good percentage of my work, I never figured it up. I am perfectly honest in saying I don't know anything about it. I gave you a very careful detail yesterday of the work I did; what proportion of it is syrup work, I don't know.

Redirect Examination by Mr. HIRSCH.

At the time I made the analyses of these eleven samples that were put in evidence yesterday, I made a tabulation, or notes, of the contents of those samples, and I was reading yesterday from the notes that I made. What you present me are copies of the notes I made concerning the samples I have testified about.

(Plaintiff here tendered and offered in evidence the notes referred to, consisting of three pages, as Plaintiff's Rebuttal Exhibit No. 137). [1850]

I testified yesterday in regard to a certain test which I called "lead number," and I think I said the



(Deposition of Dr. H. C. Fuller.)

lead number test showed the test in regard to "Coca-Cola" to be from 11 to 12. I made those tests to get the average for syrup that had stood for some time. That was syrup that I suppose started out fresh and stood in my laboratory for some time. The last determination was made nine months from the time it was received, and nine months from the time of the first determination. During my cross-examination yesterday by Mr. Littleton,—it was the last question propounded to me immediately before adjournment for lunch,—I did not hear Mr. Littleton use the word "Coca-Cola" in his question to me. I thought he was referring to the general method as I had been describing it. I have never known, in my experience with "Coca-Cola" syrup, any of this waxy or resinous matter to come down with "Coca-Cola" syrup. You say that I have been cross-examined at length in regard to my testimony in the case of the United States Government against Forty Barrels and Twenty Kegs of "Coca-Cola," and that part of that examination went to the fact of my examination of three samples of syrup that the Government alleged was "Coca-Cola," which you have no reason to doubt was originally "Coca-Cola" syrup, and which you did not doubt at that time; and that, as to the caffein content of those three samples, I testified, as shown by the record in the Government case, on page 130 of said record, that the caffein content of the first sample was .15% which would be .92 grains per ounce; of the second sample .17% or 1.02 grains per ounce, and of the third sam-

(Deposition of Dr. H. C. Fuller.)

ple 1.19 grains per ounce, and you ask if I used [1851] what you will call the alcohol method of extraction in making those tests for the caffein content of "Coca-Cola."

(Objected to by defendant because leading. Overruled. Exception.)

I did. I made the test as is described in the Government record. At the time of making the analyses that test was, to the best of my knowledge, the best test that I knew for the extraction of caffein. You ask if, since giving that testimony, I have ascertained, by research or otherwise, any better method for ascertaining the caffein content of syrups or liquids such as "Coca-Cola"; I have. The original test, the one described in the record, which you call the alcohol test, would not necessarily give the complete caffein. It was found that often times small quantities were left behind, and it was to do away with that possible error that search was made for a new method, and the new method was finally evolved, which has been proven to be satisfactory. You correctly understood me to say on cross-examination, that the limits of caffein that I had found in "Coca-Cola" syrup were from .19% to .21%. In the Government case I testified that I had found the percentages in the "Coca-Cola" examined at that time to be .15% to .17% and 1.19 grains per ounce, which I think would be .19 per cent. I further testified that, instead of using alcohol, as in the first process in making out caffein, I now use chloroform. The test now used will be referred to as the

(Deposition of Dr. H. C. Fuller.)

chloroform test. You ask how, in my opinion as an expert, and from my experience, I account for the difference between the testimony I now give to the effect that the caffein content in "Coca-Cola" syrup [1852] never varies from .19% to .21 per cent, and my testimony in the Government case, in which I found it to be much lower than that; in the first place, one of those samples was not fountain syrup, namely, the one reported as containing .15 per cent caffein,—that was bottler's syrup and was so testified to. The other two were fountain syrups, and I accounted for the difference in the results there because of the fact that alcohol did not extract all the caffein from the syrup residue. I was presented with the Government record in which I stated that I bored a hole in the side of a "Coca-Cola" keg, and, that in pouring this material out of this keg through a filter paper, a residue had been left on the paper, and that in that residue I found some undissolved material, a little straw and materials of similar nature, which looked like hay, a part of a bumble bee, some legs of insects and other extraneous matter, which was probably dust or dirt. I testified to that in the Chattanooga case, namely, the case of United States against Forty Barrels and Twenty Kegs of "Coca-Cola." That barrel from which I drew that syrup had stood in the department for three months, I also testified in that case that I had certain caffein crystals which I had taken out of "Coca-Cola." Those caffein crystals were pure white. You ask if I did not produce those caffein crystals which I



(Deposition of Dr. H. C. Fuller.)

had taken out of "Coca-Cola," and if I didn't testify that the reason why they were of a dark color was because they had been allowed to stand open at the laboratory, unfortunately, and that possibly some dirt had gotten on them; I will have to refresh my memory, I cannot remember what I said without looking at it. On page 144 of said record I was asked the following questions and made the following replies in regard to those [1853] caffenin crystals:

"Q. Why is it that this is colored and why is it that it is not the same color as this Exhibit No. 1?

"A. This was allowed to crystallize in order to show the crystallized form that caffenin will assume, and there was some dust from the outside air that got into it, unfortunately."

You say that on page 136 of the Government record I was asked the following questions and made the following replies:

"Q. In this connection, tell us what the specific gravity was?

"A. The specific gravity in the case of Sample 3966-B at twenty degrees centigrade was 1.2885; 3967-B same temperature 1.2518; 3968-B at same temperature 1.2471."

You say that I testified in my cross-examination that, in my experiments in examining "Coca-Cola" syrup, I made allowances for the specific gravity between 1.253 and 1.263; and you ask what I referred to when testifying in the present case, and what I referred to when testifying in the Government case;

(Deposition of Dr. H. C. Fuller.)

at this time I was referring to the fountain syrup alone; at the time of the Government case I was referred to both the bottlers' and the fountain syrup. The sample which showed the specific gravity of 1.2885 was the bottled syrup. You say that you note from the Government record that I did find a specific gravity that was less than 1.253, that is, in the fountain syrup. I found a sample whose specific gravity was 1.2471, and you ask if I can explain that; I don't know as I can. Aside from the keg or barrel of "Coca-Cola" syrup [1854] about which I testified in the Government case, I have never in my experience with "Coca-Cola" found any insects, dust, dirt or brush, or any such thing, in any other samples of "Coca-Cola" syrup. Prior to the Government suit I never made any special tests for the tannin which appear in the coco leaves. I heard Dr. Mallet testify at Chattanooga. I knew one Dr. Chestnut very well, he was in the employ of the Government at the same time I was. He was called as a chemist to testify in regard to tannins. That was after the claimant had put in its case. I commenced to perform my experiments in regard to tannins, referring to both coca leaves and cola nuts, some time after the testimony of the Coca-Cola Company's witnesses, I don't remember just how soon after. I performed those tests at Chattanooga. Yes, sir; I got some information from Dr. Chestnut in regard to same. You ask if my experiments in Chattanooga were performed under favorable or unfavorable circumstances; extremely unfavorable.

(Deposition of Dr. H. C. Fuller.)

You ask if they were hurried; they were hurried, and the apparatus was very meager and I had difficulty in getting reagents, as well as samples to work with. They were done to meet an emergency at the request of Dr. Harvey W. Wiley. You ask to what I attribute any inconsistencies or contradictory statements between the testimony I have given on the stand in this case and the testimony I gave on the stand at Chattanooga in regard to tannin, if there are any such inconsistencies and contradictory statements; it is attributable to the fact that I had no facilities for doing the work there at Chattanooga on which my testimony was entirely based, and also on the fact that Mr. Chestnut's work, from which I drew certain information, [1855] was incorrect. Since that Chattanooga case I have done research work on coca tannin, and have gone very thoroughly into it. You ask if I am prepared to state whether or not my testimony given at Chattanooga was incorrect, or entirely correct, or whether the testimony which I have given in this case, after I have made a thorough research, is correct; the testimony which I have given in this case is correct,—the testimony which I gave in the former case needs modification. I can now make modifications in that testimony in the light of further experiments. Yes, sir; I did analyze Merchandise No. 5 before I went to Chattanooga, but I had never analyzed it at that time for the tannins. You ask when was the first time I analyzed Merchandise No. 5 for the tannins, before the Chattanooga suit, after



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the Chattanooga suit, or during the Chattanooga suit; I have forgotten, but I think I made the tests there at Chattanooga. Whether I did or not, I am not positive. Since the Chattanooga suit, I have worked with the tannins in coca leaves. This tannin from the coca leaf has flavor and taste. A flavor agent may be one which imparts a characteristic flavor to the mixture to which it is added, or it may be one which in itself has no special value as far as producing flavor by itself is concerned, but which acts as a blend to produce with other substances a pleasing or otherwise desirable flavor. You ask if I would say, or not, that the tannins from the coca leaves act in making up a part of the blend that goes to make up the full flavor of "Coca-Cola"; they do. You say that, on cross-examination, I stated that I had used Merchandise No. 5 with essential oils, at Chattanooga, and that I stated that [1856] Merchandise No. 5 could not be noted in this concoction that I got up with oils and Merchandise No. 5, and you ask if I meant in the Government case that it had nothing to do with the flavor at all; what I meant to bring out in that test was this; the mixture with the oils, and it was not necessarily the same oils, or in the same proportion in which the oils were mixed in "Coca-Cola," but any other mixture, any flavor or odor characteristic of Merchandise No. 5 was not apparent in the blend as the characteristic flavor and odor of Merchandise No. 5; that is the whole purport of that testimony. In testifying in regard to Merchandise No. 5 I meant to testify at

(Deposition of Dr. H. C. Fuller.)

Chattanooga that as far as I went at that time, as far as my knowledge and experience was at that time, I found nothing characteristic of coca or cola. Coca leaves and cola nuts are separate and distinct substances. They are drugs. You hand me some caffeine crystals; I could not tell you from where or whence that caffeine was derived. Caffeine is caffeine. You ask if there is anything in the cross-examination to which I was subjected yesterday, which appears to be inconsistent between the testimony which I gave in the Chattanooga case, and the testimony which I am now giving, which I would like to explain, or anything that I would like to add to what I have stated concerning the same; I would like to impress the fact that the tannin content of coca leaves, as reported in the Chattanooga case, was based on the work of Mr. Chestnut and a man named Eton, in Washington, and their determinations were made by a method for determining tannin in tea. That method is not applicable to coca tannin and accounts for the results which were obtained, [1857] namely, two per cent. On completion of that case, I took up a very careful study of the coca leaf in order to determine the characteristics of the tannin, and that lead me to perform some experiments as to the amount in the leaf, and I was immediately struck by the fact that it differed entirely from the tannin in tea, and any method that was used in determining the tannin in tea could not be used for obtaining the tannin in coca leaf; and, of further study, I developed that the percentage was, as I stated yesterday, I

(Deposition of Dr. H. C. Fuller.)

think, from eight to fifteen per cent, depending upon the leaf. That accounts for the statement that I made that there was two per cent. It was simply based on the results of Mr. Chestnut. Regarding the statement that there was probably ten times as much tannin in cola as in coca, that was based on hearsay, as reported by those other men who came down from Washington. I think that is all that I would like to state in regard to my testimony there. I am constantly at research work for the purpose of improving the methods and my knowledge in regard to scientific problems, and I am a better qualified expert now than when I testified in the Government case at Chattanooga. If there are any inconsistencies between the testimony I have given here and the testimony I gave at Chattanooga I attribute it to the lack of knowledge and the incompleteness of methods obtainable at that time for the questions at hand.

You have read to me the following questions and answers appearing on page 1787 of the Government record:

“Q. What two reagents, or what two agents, were there that Drs. Mallett and Caspari used that you say are common to all tannins as reagents?  
[1858]

“A. The iron chloride and the ferricyanide of potassium and ammonia.

“Q. What are two that are common?—These three were applied to those distinctive tests, but what were the two that were common, or did I misun-



(Deposition of Dr. H. C. Fuller.)

derstand you?—did you say there were three that were common and two uncommon?

“A. I think I stated that the iron chloride and the gelatin and the cinchonine sulphate tests were common to both cola and coca, and I think I further stated that the ferricyanide of potassium and ammonia test were given by tannins generally.”

You ask me to explain that. The facts that were intended to be brought out at that time were that the potassium ferricyanide and ammonia tests were common to tannins generally, and that the experiments performed by me at Chattanooga, which I have said were incomplete and meager, gave identical reactions in the cases of the matter extracted from coca and from cola with iron chloride, gelatin and cinchonine sulphate. There are other tannins that I know of that will respond to the iron chloride test, but will not at the same time give the other reactions which I have mentioned.

Recross-examination by Mr. LITTLETON.

You say that you believe that, after my attention was called to the break that I had made, an adjournment was taken for lunch and that I discussed the matter with counsel for plaintiff, and then came back on the stand and made the statement that I had not found any waxy, resinous substances [1859] in my analyses of “Coca-Cola” syrup; I stated emphatically that I performed the determinations for caffeine, the point in question. There are no waxy, resinous substances extracted from “Coca-Cola.” I never did find any resinous substances in “Coca-

(Deposition of Dr. H. C. Fuller.)

Cola" syrup. This barrel of "Coca-Cola" syrup which was libeled in the case at Chattanooga, and which I stated remained in my laboratory in Washington for three months, was unopened during that period, and remained in the same condition as when I got it. There was no chance for any bumble-bees, or dust or dirt, hay or these other things, to get in there during that three months. I strained it immediately after I opened it. I made these tests I have referred to in Chattanooga at a little University there, the University of Chattanooga. I don't remember the name of the chemist who tendered me the benefit of the laboratory. Dr. Emory worked with me on these experiments. You ask what was the difference in the method I pursued then and the method I now pursue in determining the tannin reactions; well, the method I pursue now, I have something to work with; the method then, I didn't have anything to work with. You say the method was all right, but the tools were deficient; the tools and my experience was very limited. We both spoke of that, of the farcicality of doing things of that kind under those conditions. You say if there is any difference in the method I then pursued and the method I now pursue, you wish I would explain it, and you say that your question is independent of the tools and appliances; that I cannot say, because I don't remember all the details I performed down there. You ask me to tell you what tools [1860] or appliances and implements we used in making those analyses in Chattanooga; I don't remember

(Deposition of Dr. H. C. Fuller.)

all of them. You ask me what tools or appliances were lacking; I don't remember all those details. I know it was a very incomplete laboratory. If you want to take a catalog of some apparatus factory and go through it and check off all the things that one needs in a complete laboratory you can do it. You certainly do need all the apparatus and appliances and tools and equipment of a complete laboratory to perform these tannin reactions. Yes, sir; you might need a pycnometer for this tannin reaction. No, I do not use it in making my tannin reactions. I use it for the Coca-Cola, but not for the tannin tests. You ask if the Westfall balance is necessary; I never use the Westfall balances in my laboratory. Yes, sir; I think they had a separatory funnel in that Chattanooga laboratory. I think they had two or three test tubes there, I don't remember whether or not they had the distilling apparatus. I assume that they had a Bunsen burner, but I am not certain. I think they did have scales or balances to weigh materials. You ask if I was not put on the stand for the purpose of rebutting the testimony of Drs. Caspari, Sadtler and Mallet, and if I didn't perform those tannin reactions which were mentioned, those four or five tests, for the purpose of qualifying myself to rebut their testimony, and if I did not perform those tests and go on the witness-stand there and testify under oath that I had performed them, and that there was no difference between the reactions of tannin in cola and reactions of tannin in coca, and if that was not the purpose



(Deposition of Dr. H. C. Fuller.)

of my taking the stand in rebuttal, and if that is [1861] not the idea I intended to convey to the court and jury by my testimony; well, that is a pretty long question to answer. I guess you had better pick it apart. I will say the questions and answers can give the explanation of the reason why I went back on the stand in Chattanooga in that case, and I stand back of that now. That is all the explanation I need to make. I don't remember whether there were three barrels of "Coca-Cola" libeled in that case, I don't know whether or not the three samples of "Coca-Cola" syrup which I analyzed came out of barrels or kegs. Mr. Lynch, who was the inspector, is the best man to consult on that point. You ask if all the "Coca-Cola" that was libeled was either in barrels or kegs; I don't admit anything about what it was in, I am sure. I was simply in the case as an analyst. I don't know anything about the containers. You ask if I knew of my own knowledge which one of the three samples of "Coca-Cola" syrup which I analyzed for the caffeine content was the bottled syrup; the testimony was very specific on those points. I knew from what the record gave which was the fountain syrup. I did not see it taken out of any barrel or anything of that kind. The information which I said Dr. Chestnut gave me was this; he said the percentage of tannin in coca leaf was .2 of one per cent, and I have since found that it was wrong, and I explained the reason why he did not get the correct percentage was because he did not use the proper

(Deposition of Dr. H. C. Fuller.)

methods. No, that is not the only thing on which he led me astray. He had some information about the "Coca-Cola" product, but I have forgotten what it was now. Yes, sir; I think he [1862] testified in that case also. Yes, sir; I think I was asked in the Chattanooga case if I had ever purchased any coca under the name of coca on the market, and I think I replied that I had. As a scientific man, I bought it under the scientific name of coca; coca and coca leaves,—the words are synonymous to the scientist. [1863]

(The following deposition was taken by plaintiff as its rebuttal testimony at Chattanooga, Tennessee, on July 5th, 1915:)

**Deposition of J. C. Mayfield, for Plaintiff**

**(In Rebuttal).**

J. C. MAYFIELD.

Direct Examination by Mr. HIRSCH.

I testified on behalf of the defendants in this case at New Orleans, at the Gruenwald Hotel, somewhere about March, 1915; I do not remember the exact date.

Q. 4. I will read from your testimony, page starting:

"Q. 1328. Do you know of a Mr. Rice of Memphis, Tennessee? A. I have heard of him. Q. 1329. Do you know him? A. Yes, sir. Q. 1330. Did he work for you? A. Yes, for a while. Q. 1331. Was not there some claim that he took your formula away with him? A. Yes, sir. Q. 1332. Was he prose-

(Deposition of J. C. Mayfield.)

cuted for that? A. Yes, sir. Q. 1333. He started that with your formula? A. I do not know. Q. 1334. But he was prosecuted? A. I do not know, only about the case. Q. 1335. You were not there at the hearing? A. No, sir.” [1864]

You testified to that effect at New Orleans, did you not? A. If I said No, sir, it was a mistake; I said yes, sir. Q. 5. This is your testimony, taken at New Orleans, reported by the Commissioner on behalf of the defendants? A. I don't know about the typographical work there, I was there, of course. Q. 6. You say that is a typographical error? A. A typographical error. Q. 7. And that you did not say “No, sir”; you said “Yes, sir”? A. I said, “Yes, sir.” Q. 8. And that Mr. Fain, the Commissioner, appointed on behalf of the defendants, made a mistake; is that it? A. They must have made it; it is a mistake. Q. 9. You were there? A. I was there; yes, sir. Q. 10. Did you testify in that Rice case? A. I did. Q. 11. You were sworn in that case, were you not? A. I suppose so.

The case referred to as the Rice case is the case of the State of Alabama vs. Mellville Rice, heard in the first division of the inferior court of Birmingham, before [1865] Judge I. H. Benners, August 9th, 1907, with the following gentlemen appearing on behalf of the state; Messrs. Zell Gaston, and L. J. Hailey, and on behalf of the defendant Mellville Rice, Messrs. Allin and Bell. Yes, sir, I remember the title of that case and about the circumstances.



(Deposition of J. C. Mayfield.)

I did testify in that case. You hand me a transcript of the testimony in that case, which is known as Plaintiff's Rebuttal Exhibits Nos. 4 and 5, and you ask me if that is a true and correct transcript of that record; I testified in that case, and that is all I can say about it being true and correct. I remember testifying in that case. I think these questions were asked me, as they appear in that transcript, and I presume I answered the questions asked, as they appear in that transcript. The answers which I gave to the questions propounded to me in the case of the State of Alabama vs. Melville Rice, as shown in said Rebuttal Exhibits 4 and 5, were true to the best of my recollection. [1866] Q. 453. I will ask you, going back to that question of the letter, if this is the letter that was introduced into that record, and if you wrote that letter, the letter that you testified to you recognized that handwriting, and you answered "I think that is my handwriting." I will ask you if you wrote that letter that appears in that record as an exhibit and which was copied in, commencing on page 51 of Complainant's Rebuttal Exhibit No. 4 and 5? A. You got the letter. Q. 454. I have a—written— A. You have not the original letter? Q. 455. I ask you if this is the letter? A. Read it, and let's see. Q. 456. Parker House, Boston, June 18th, 1899.

"My dear Judge:

"I have just completed my experimenting with coca extract. I have perfected everything. Now

(Deposition of J. C. Mayfield.)

listen, our original formula called for just twice the amount of coca extract that we are now using. I kept cutting it down to make the flavor more pleasant. It did not call for glycerine. I put that in to eliminate the bitter from the coca extract. I got that from the negro that worked for Coca-Cola Company. The Coca-Cola Company extracted the leaves [1867] so they could hold up the quantity of extract, I now have. I read an article from a German chemist and Brooks, the old Coca-Cola drummer told me some things last winter just before I left Atlanta. You do know that it is the coca extract and caffeine that does the work. All the trade who have been cutting the goods, that is, mixing simply syrup with it, say wine coca would not stand as much. It will now. So I will show you just how to use the glycerine with the leaves while I am with you Sunday and Monday. I want you to use two and a half gallons of the extract you are now making instead of  $1\frac{1}{4}$ . Measure out the  $2\frac{1}{2}$  gallons extract, put in a 5 gallon keg and put 2 gallons glycerine with it in the same keg, shake it three or four times a day. You can use it in six hours after thus treating it. If the glycerine eliminates the bitter, which it does, you can see how much more effective it can do the work in close contact. It's still better to use a certain per cent with the leaves in mixing them that I will show you. Now change your formula to  $2\frac{1}{2}$  gallons instead of  $1\frac{1}{4}$ ; use 2 gallons of glycerine instead of 5, it will not change the cost

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of the compound nor the flavor one bit, and gives a more exhilarating drink. Every man in the office here this morning was carried away with the improvement. I will make some flavoring for you Monday so you can [1868] see. Have alcohol, leaves, glycerine, lime C. P. I will go and buy the oils Monday morning. We have now the original formula and Coca-Cola exactly; buy 12 lbs. confectionaries and sugar, extra quality, dissolve it with 1 gallon boiling water so I can make some tests Monday. I will have some "Coca-Cola" and "Wine-Cola" with me. I am "tickled to death" at being able to get back to the original formula, and make it identical Coca-Cola. Have everything ready and we will start operations Saturday morning.

Your friend, JACK."

Did you write that letter? A. I remember that letter. Q. 457. That was your letter, that you wrote? A. I made that letter; I want to explain it. I wrote that letter and had a reason for doing so.

You state on my examination at New Orleans, there was introduced a certified copy of the registration of Koke in the State of New York, and you ask if in obtaining that registration I did not make application to the Secretary of State of New York for the registration of my trademark; that is a good long time ago, but I have some papers here that will show that I did. I think I did make an affidavit with that application. You hand me, Plaintiff's Rebuttal Exhibit No. 84, and ask if that is not an ex-



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emplified copy of the application which I signed; I was getting them all over the country—I will say yes. You ask if I did not state in that application the following, referring to Koke: “The [1869] same has been in use by applicant since June 1st, 1909”; I will say this, I had reference to this particular label, keg and barrel label I was registering; I had reference to that particular label. I had no reference to the name “Koke” at all, except that particular label. I attached the label to the application, so I would be on the safe side. You present me with Plaintiff’s Rebuttal Exhibit No. 85, which you say is an application to the Secretary of State of Indiana, and you ask if I made that application; I made them all over the United States. You ask if I made that one. I do not see that you have got the label here, and that ought to have it. I do not see it, it is just like the other one. I attached my label that I had particularly adopted, keg and barrel label—well, it was “Koke,” I had it, I have not got it in there. You ask if I did not sign the affidavit; I would not say. I know I got them in every state in the Union. Some states do not give you trademark protection, Mississippi and Ohio do not give it; I could not get it there. You ask if I made this statement in my application, printed on it: “Length of time, if any, during which trademark ‘Koke’ has been in use? A. Since June 1st, 1909”; I had attached to my application to that state, as I did in this particular instance, that particular label. My label does not appear on the copy.

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of the application you present to me, but it did on the application which I made. I attached it to all of them. I was on the safe side, I attached it as I did here. That was when I had that particular label made. I was referring to the label "Koke"—that particular label. You hand me a copy of the application [1870] to the state of Massachusetts, marked Plaintiff's Rebuttal Exhibit No. 86, and ask whether I signed the affidavit in that: Well, they have not got my label attached thereto, which I attached to all the different state applications. I will say that copy presented to me is incomplete. You ask if I made this statement: "Length of time, if any, during which the trademark has been in use? Since June 1st, 1909"; I meant this particular label, I did not mean the name "Koke," but the label that I attached thereto, to every trademark I had in each state. You hand me a copy of the application to the State of Nebraska, marked Plaintiff's Rebuttal Exhibit No. 87, and ask whether I signed the affidavit to that: I will say yes. Now, to explain this, I have to go back to the history. The Coca-Cola Company, or somebody gave me a black eye with Celery Cola, it was dragged through the express company and wholesale company and drug company of New Orleans, and I put the name Koke—was having these names registered in the states. I was kinder afraid of the Federal law, don't you see. This particular application at Lincoln, Nebraska, had the same label "Koke"—all my applications had that on it. They

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have not got it here. Inasmuch as I was getting trademarks in every state in the United States, I will say, yes, sir. You ask if I swore in that application the following: "The trademark or label has been in use since June 1st, 1909, and consists of the arbitrarily selected mark or character herewith illustrated: 'Koke Trademark' "; to my application that particular label was attached. You have not got it here, but I had a particular label that you have got in this other one, that is what [1871] I had reference to. Let us get this straight. Let us see the preceding one to this, they are all connected. I want to see the one—that is the one I want to see, this was attached to all my applications, you have not got it in these others, but this is what I had reference to. You hand me Plaintiff's Rebuttal Exhibit No. 88, being a copy of the application for the State of California, a certificate therewith, and ask whether I signed that one; well, I will say to that as I did to the other, that I was getting them in every state in the Union. You have not got the labels with that, that I attached to the kegs and barrels in which I shipped my goods, it must be the same label. You ask if I did not swear in that application, that: "This trademark consists of 'Koke, a Beverage.' This trademark has been used in its business since the 1st day of June, 1909"; not the trademark, I meant this particular label that goes on the kegs and barrels. That is what I referred to. The word "Koke" had been in use since 1888.



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Mr. HIRSCH.—I move to strike the latter part of the answer. Overruled. Exception.

But this label, that is when I got this label up and that is what I had reference to. You present me with a copy of an application to the State of Pennsylvania, marked Plaintiff's Rebuttal Exhibit No. 89, and you ask if I signed the affidavit to that; you have carbon copies of this, I do not know about this. I do not deny that I signed such a one as that. I admit I got them in every state in the Union, but you have not got the original. You ask if I did not state in that application, "The trademark consists of the word 'Koke'; the length of time, [1872] if any, during which it has been in use; fourteen months"; I had attached thereto this particular label, as you have got in the preceding one (Plaintiff's Rebuttal Exhibit No. 84), I had that made—that is what I had reference to—but the word "Koke" had been in use in different shapes and different forms for years and years prior thereto, but I had reference to this particular label. I was getting state registrations on labels. You hand me Plaintiff's Rebuttal Exhibits Nos. 11 to 60, inclusive, and ask me to examine them before you ask me about them; that is a good long proposition.

Mr. LITTLETON.—I object to any examination with reference to these letters, because the introduction of the letters was objected to in that they were privileged communications, and I want to reserve the right to put in the objection to an examination touching those letters in event the original objections to

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the introduction of them is sustained.

Plaintiff's Rebuttal Exhibit No. 11 is on the Mayfield Oil Company's stationery, and it is in my handwriting. At that particular time I was a stockholder in a great many concerns. Of course, I could not identify this typewriting business on Plaintiff's Rebuttal Exhibit No. 12, but that is my signature on there, that is my handwriting. I signed that letter. You hand me Plaintiff's Rebuttal Exhibit No. 13, and ask if it is a letter I received from Mr. F. T. F. Johnson, an attorney at Washington, D. C.

Mr. LITTLETON.—I object to any examination with reference to that, because it was a confidential communication between attorney and client. Overruled. Exception.

Now, I cannot say I remember this thing [1873] away back there. Of course I received that letter, it is from my attorney. I remember Plaintiff's Rebuttal Exhibit No. 14. Plaintiff's Rebuttal Exhibit No. 15, which is a letter addressed to "Dear Pogue," which is in my handwriting. That envelope is the envelope of the J. C. Mayfield Manufacturing Company, from St. Louis—Kansas City, that is it. Plaintiff's Rebuttal Exhibit No. 16, is on the stationery of the Mayfield Manufacturing Company, and is in my handwriting. Plaintiff's Rebuttal Exhibit No. 17 is on the stationery of the Celery-Cola Company, and I wrote that letter, that is my signature. You hand me Plaintiff's Rebuttal Exhibit No. 18, and ask if that is a telegram I sent to C. J. Pogue;

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put all that in and say yes to it. Say yes to the whole shooting match and get rid of those. I admit Plaintiff's Rebuttal Exhibits from eleven to sixty, inclusive.

(Plaintiffs here tendered and offered in evidence Plaintiff's Rebuttal Exhibits Nos. 4 and 5, and under the head of tendering Nos. 4 and 5, offered each question and answer that was asked Mr. Mayfield in regard to the record of the State of Alabama vs. Rice, as a separate exhibit, and tendered the same in evidence.)

Mr. LITTLETON.—I make the same objection now to that evidence as when first introduced and move to strike it from the record. Overruled. Exception.

(Plaintiff also offered and tendered in the record each, separately, the documents marked Plaintiff's Rebuttal Exhibits Nos. 11 to 60, inclusive.)

Mr. LITTLETON.—I make the same objection now as I did to the introduction of these exhibits when first introduced in Birmingham, and [1874] move to strike them from the record. Overruled. Exception.

Plaintiff offered in evidence Plaintiff's Rebuttal Exhibits 84 to 89, inclusive.

Mr. LITTLETON.—Same objection as when first introduced. Overruled. Exception.

Cross-examination by Mr. LITTLETON.

I was asked this morning certain questions and answers pertaining to the record of the State of Ala-



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bama vs. Mellville Rice. I do not remember the specific answers and questions, but some of the substance I remember, but not very much of it. As I stated this morning, it was before a Justice of the Peace court, and ten years ago. This man Mellville Rice advertises in the Birmingham papers for a position as bookkeeper and stenographer, and as I was in need of somebody to help me just at that time, I answered his ad, and when he came down there he brought convincing evidence of his ability to handle the books and collections—his recommendations and everything was satisfactory—of course I looked him up in Bradstreet and Dun, and then employed him. It developed that he was not what he represented himself to be, what he told me he was, and he took some things or had them taken from my place of business—my formula book and materials, etc.—a short time after he was there, and I had sufficient proof to convince me that he was guilty and I had him arrested. He was found guilty before the Justice of the Peace Court in Birmingham, Ala., and I think he was bound over from that court to the grand jury, is my recollection. With reference to this letter to “Dear Pogue,” dated 1899, I was in hopes we would get through with this lawsuit without dragging through the graveyard and disturbing the dead, and I have so far evaded it, but since you brought up that letter I have [1875] to explain. This “Dear Judge” was the husband of my first wife. I will state, however, that she secured a divorce from

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me in Atlanta legally. The Court gave me the children and I did the best I could to raise them and educate them and bring them up. My wife was demented. All our family physicians told me so, but at times she had rational intervals, and at those times she was very grasping—making money, and from the fact that I bought out the Coca-Cola business while she was my wife, she thought she was entitled to a copy of the Coca-Cola formula, notwithstanding the fact that she made with her attorney a final settlement that was satisfactory. This letter was written several years after our divorce. She demanded of me a copy of that formula. I put her off with one excuse after another. At this time my son and I had a little business in Jersey City. She went to his place of business—I had no objection,—because my son was her son. I was over there once or twice and she realized the value of the Coca-Cola formula—or the Koke formula, which was the same, and thought if she could get a certificate from me she would be able to make considerable money by selling this formula. I put her off with one excuse after another, to the effect that I had misplaced the formula—lost it here, yonder or some place else—and that I would get it. I wrote her and wrote Brown several letters along that line, but so very anxious was she to get it that she came to Boston. I do not know, but I believe when I wrote this letter in question she was there. I gave it to her. She came there for it. As I said [1876] before, she was demented. I

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wrote that letter, and I wanted to make it ring with a genuine ring, so that she and Judge Brown, who was her lawyer—he was her husband, but he was a lawyer, of course, he was a judge—and she went back satisfied with that letter. I had put her off as before stated with other excuses. I promised in that letter to be in Jersey City or New York on Monday. I was not there and did not go. If I had gone and given her a copy of my formula and taught her and Judge Brown how to make Koke—Coca-Cola—this letter and Mrs. Brown would never have appeared in the Rice case; but I did not go because it was practically my all. I came on back home. I realized what I was up against—a woman who was demented and determined to have a copy of this formula—and being the mother of my children, naturally I thought and planned every way possible to get around giving her what she wanted, without wounding her feelings. About the same time I received a letter from my father that one of my children was sick, so I left Boston. I did not go to New York or to Jersey City, nor did I comply with my instructions in that letter. I came on to Atlanta, and then to Birmingham, because I did not do what I promised to do she appeared in this Rice case for no other reason in the world except to get all she could from me relative to this formula. She had no interest in the case, and she was there, and it was her questions, largely, that I answered. Of course she propounded them through the attorney. The attorney did not know



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anything about all those oils, and all those things—she, in a measure, did—that is what she was after. She had possibly a superficial knowledge of the formula, and she wanted facts—the proportional parts [1877] and by being there she hoped to get them. I evaded in a way a great many of her questions—those which did not apply to the case at issue, knowing that she was not at herself. I had the city physician of Birmingham, Alabama, to be present at that time, and he was there. I told him what I had to contend with, and he said he would be present and he noticed her condition. As before stated, the case at issue had no bearing on a great many of these questions, and as she had demanded a copy of the Coca-Cola formula, or the Koke formula, and I had told her and Judge Brown that I had lost it, or misplaced it, she was there to get all the information she could. Of course I had not lost it, and I had not misplaced it, because I was making Koke in Jersey City at that time from the original Coca-Cola formula—I do not mean I was making Koke in Jersey City at the time of the Rice trial, I am talking about Jersey City when I wrote this letter, and she was in Boston demanding of me a copy of that formula and the certificate from me that it was the original Coca-Cola formula. I would not give it, but evaded her and put her off with the excuse that I had lost it, in order to get rid of the woman that was not at herself. I was trying to protect my property and my life. She had threatened my life and in fact had

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attempted it two or three times. It is a fact that the formula book which was stolen in that case was a formula book of Celery-Cola and Pepsi-Nola. I was president of the J. C. Mayfield Manufacturing Company, which was a corporation. It was organized about five years before this trial, which occurred in 1907. J. H. Zareco, of Nashville, Tennessee, was the Secretary. The J. C. Mayfield Company had an office in Birmingham and in Nashville. There appears in the [1878] Rice record the following questions and answers:

“Q. Mr. Mayfield, what business is the J. C. Mayfield Company engaged in?

A. They have contracts with the Celery-Cola Company on their specialties.

Q. What specialties?

A. Celery-Cola and Pepsi-Nola.”

Those were the only two things the J. C. Mayfield Manufacturing Company had just at that time. I individually owned the Koke formula. It was not owned by the J. C. Mayfield Manufacturing Company, but by me as an individual. I did not mention Koke in the Rice case, and I kept it out of the record, because it was not at issue. I was not asked anything about it. On pages eight and nine of the Rice record, referring to that formula that was stolen in that case, I was asked who wrote it and replied that I did, and I was then asked when I wrote it, and I replied, “I do not remember, possibly fifteen years ago.” The facts about my writing that book are, that old Dr. Pemberton was a great in-

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ventor—that was his line, his long suit—and I remember at that time he suggested that we make Celery-Cola. We did some experimenting along that line, but his idea was to have the drink have what it called for, celery and cola, so in the Celery-Cola that he and I experimented with, was celery and cola—left out the coca. He explained to me that the trademark law required you to have what your label called for. We made a Celery-Cola, as per his suggestion along that line, experimented, however, we never put it on the market. That was back there just before his death. A year or two or three years thereafter—I continued to experiment along that line—I modified the formula, and put various things in it, and I [1879] remember putting in the coca extract—maybe some other things, but I remember that very well. That was along in 1892 or 1893. Of course I was not able to push the things we already had, and old Dr. Pemberton's idea was that Celery-Cola would be a very good thing, and I thought so, too. I continued to experiment and kept on doing so, so that I made the formula different from what he and I had it. I am talking now about the Celery-Cola formula. Of course that is away back yonder twenty odd years ago, and it is hard to remember all those little details. Dr. Pemberton said to me: “Now, these caffeine beverages ought to be at the soda-fountain what the alcohol beverages are at the bar-room; ought to have a great many with different flavors, get more business.” That was his idea, but I never carried out



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his formula exactly. I modified it quite a little bit when I put it on as Celery-Cola. But the Celery-Cola formula I used then was the Celery-Cola formula I got up myself. The record in the Rice case shows that I was asked the following questions and made the following replies:

“Q. When did you first commence using those formulas, Mr. Mayfield?

A. I commenced in a small way about eighteen years ago.

Q. What formula did you write first?

A. It has been this same Celery-Cola formula.

Q. Celery-Cola eighteen years ago?

A. About that time.

Q. Was it called Celery-Cola then?

A. I think so. I got it out, first cola compound, made in an extract form.”

I am asked to explain what that is, and whether or not the Celery-Cola formula was the first formula I ever made; well, the first formula we made was back there with Dr. Pemberton, before his death. Of course he was a sick man, as I stated in my direct examination. [1880] Once in a while he would come down to the office, and being an inventor that was what he had in his mind. He did not care anything about what he had already accomplished, but wanted something new. He died in the same year, 1883, while we were getting out our Koke in an extract form, and at that time we made our arrangements to get out a Celery-Cola in an extract form. I could not say that we sold any of it at that time,

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but all our plans and experimenting along that line were looking forward to that kind of business, but I do not remember having sold any of it just at that time. However, that is what we had in view. I did not explain about the Koke when these questions were asked me in the Rice record, because I was not asked anything about it. I was just answering the questions that were propounded to me. Of course Koke was my very oldest thing, and it was not the Koke formula that was stolen. The Rice Record shows that I was asked if I had ever been employed by any of the Coca-Cola people in Atlanta, or Georgia anywhere and that I replied that I had never been employed by the Coca-Cola people, which is true. I presume that is the idea I had in mind when I made that answer, if that was the question that was asked. I never was employed by the Coca-Cola Company, as a matter of fact. On page 12, of the Rice record, appears the following questions and the following answers:

“Q. It was the first formula, you say, that you made?

A. Yes, sir.

Q. And you made that when?

A. That has been about eighteen years ago.

Q. You and Dr. Pemberton?

A. Yes, sir.”

The facts are, with reference to that, that old Dr. Pemberton was considered the greatest chemist south. I [1881] regarded him as such, and when he could come down to the laboratory and help to

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experiment along that line he did, not only that, but he had other things which I did not adopt and bring forward. Later on, and as I said, I modified it a little bit after his death, but really I was not a chemist. I was not even a druggist, but by experimenting and tasting and testing along that line, we got up a formula that we thought would be acceptable to the public. You ask what the facts are with reference to the formula for Celery-Cola and to the formula for Koke—which was the first formula; Koke was the first formula. In response to the question asked me in the Rice record, if the Celery-Cola formula was the first one that I made, I replied thereto, “Yes, sir.” Because the Celery-Cola formula was the first formula that Dr. Pemberton and I made—later that I really felt that I made myself. Now, I believe I can claim that I made the Celery-Cola formula myself. I do not claim to have made the Koke formula. I had absolutely nothing to do with that. Dr. Pemberton made that, that is what I bought out. I was asked in the Rice record when I made the Pepsi-Nola formula, and I replied that, “I made it about five years ago,” that is about five years before 1907, and that is about when I did make it. In making a formula you don’t make it in a day—it takes weeks and months to experiment and get it down like you want it. Mr. H. H. Britton did not know my Celery-Cola formula. [1882] Q. 751. Did anybody else know the formula for Celery-Cola? A. No, sir. Q. 752. Did anybody else know how to mix the syrups up? A. I will state this, in the way of expla-



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nation. There are two formulas, one is a scientific formula, making the extracts, the flavoring, the compound, and the other is a mixing formula, a manufacturing formula. Mr. Britton did not know anything about the scientific formula; he knew the mixing formula. Q. 753. What is the difference between the scientific formula and the mixing formula? A. The scientific formula is compounding the essential oils and making the fluid extracts, as we use now—tea—prior to the Pure Food Law it was the fluid extract of coca leaves—and making of the other things we needed in an extract form from the crude drugs. When we had the other people to do the manufacturing we would number these things. No. 5 would mean a certain thing; No. 4 would mean caffeine, or sugar, or flavoring, or extract of some particular thing. That was a mixing formula, manufacturing formula, and the other was a chemical formula, a chemist's. Q. 754. Did anybody else besides yourself know the mixing formula? A. Oh, yes, my sons knew the mixing formula, but they did not know the scientific end of it. Mr. Britton knew the mixing formula. [1883] You ask what connection, if any, I had with Wine of Coca, and when that became a soda-fountain drink; I and Mr. Bloodworth, my associate, sold out the Wine Coca business and other specialties that we had to Mr. Eady of West Point, Georgia, away back, maybe in 1891, or two or three, along there. We sold him, among other things, the Wine of Coca. At that time we had never put it up in anything except a cheap wine, and tonic. I did

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not consider it as a medicine, especially, it was a tonic. After we had had it quite a while we thought possibly we might build up a little trade on it in the syrup form, instead of the cheap wine, which we did. We modified the formula. I did not sell Eady the formula to make a beverage in this syrup, but it was charged and put into a syrup later. He used the same script in the syrup that we had heretofore used in the wine. He never got a trademark or registered label or anything, just went on as Wine Coca, both in wine and in syrup, that was the way that was. [1884] Mr. Eady was in West Point, and as I was in Atlanta, I looked after this Wine of Coca business for him. I was also in the real estate business there. His business was a side issue. I also had the Koke business with Mr. Bloodworth at the time, all of which did not amount to very much away back there. On page 19 of the Rice record appear the following questions and answers: "Q. Now, Mr. Mayfield, you are the only person, you say, that knows anything about either one of these formulas, or has a copy of them, and you say there are no other similar formulas in existence? A. I did not say that. Q. You do not know of any other formulas? A. No, sir." I had not heard of any Celery-Cola beverages on the market, and I had not heard of any other Pepsi-Nola beverages on the market, and I thought I answered those questions correctly. On that same page appears this question and this answer: "Q. Don't you know this formula of yours is one that was copied from another formula that was in use fif-

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teen years or more in Georgia? A. No, sir.” That answer is correct. It is not a copy of any formula I had ever seen before. Of course, there may have been some things in it that was used in other formulas, but that particular formula I had not seen anything along that line. On the same page appear this question and this answer: “Q. These drinks are what is by the common people known as ‘dope’ drinks? A. I think some people call them that.” That is a fact. Just along there—that has been ten years ago, all cola drinks, or coca drinks were classed by a good many people as dope drinks. [1885] I stated it here (indicating Rice record) and I state it now. On pages 21, 22 and 23, of the Rice record are some questions propounded about a man named Boynton, in Boston, and I was asked if I did not sell him a formula and I replied “No.” And explained that I sold him stock in the Wine-Coca Company, and then on page 23, I was asked this question and made this reply, according to the Rice record: “Q. Did you sell him the right—what sort of drinks were you manufacturing then, Mr. Mayfield? A. The company I was connected with was manufacturing Wine Coca.” The facts are that this particular Boynton Company made a beverage, a Wine Coca, and I was connected with my Koke business at the same time. Of course that was not brought out in the Rice trial. On pages 24 and 25 of that record appear these questions and these answers: “Q. Mr. Mayfield, what does your company manufacture besides this Celery-Cola? A. That is all they do.”



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“Q. Does this Celery-Cola Company manufacture anything except Celery-Cola? A. They do other business but do not manufacture anything else except these two drinks.” The facts are that those two specialties is what they manufactured. The Celery-Cola Company had a license from the Mayfield Manufacturing Company to manufacture those two specialties. While they brought other extracts and manufactured other syrups, and they bought other things and sold them on the market. They owned a business as any other wholesale merchant would, they would buy things and sell them for a profit. They bought a good many different things. When I say the Celery-Cola Company manufactured the Celery-Cola, I mean they mixed [1886] the syrup. I am asked to state whether at that time the Celery-Cola Company made the Koke, or whether the J. C. Mayfield Manufacturing Company made it, or whether I made it, or who did make it, and who owned the Koke formula at that time; at that time I owned the Koke formula individually. I had, of course, a great many customers who ordered the Koke. I manufactured all the stuff, not only Celery-Cola and Pepsi-Nola and manufactured Koke, and we supplied the trade in the orders for Koke, just as we would for Celery-Cola. If you ordered Koke we would ship that. On page 26 of that record appears this question and this answer: “Q. Have you got any formula, has this company got any formulas except these one or two that you have mentioned—the Mayfield Company? A. The Mayfield Company, no sir.”

(Deposition of J. C. Mayfield.)

The facts are that the Mayfield Company had only the Celery-Cola and the Pepsi-Nola—they did not have the Koke formula, I had that individually. Then I was asked if the Mayfield Company had any property in Birmingham, at all, and I replied that they did not, and my reply was true, I presume. All the property they owned there in Birmingham were the two formulas, Celery-Cola and Pepsi-Nola. The Celery-Cola Company was the agent, or licensee of the Mayfield Company for that particular place. The Mayfield Company had licensees at other places, and in Birmingham their licensee was the Celery-Cola Company. The title to the office fixtures and things of that kind was in the Celery-Cola Co. On the same page of that record appear these questions and these answers: “Has the Celery-Cola Co., or do they own any of these formulas? A. No, sir. Q. You are the president of the [1887] Celery-Cola Company? A. Yes, sir. Q. They are in the same room together, same building? A. Yes, sir. Q. The Mayfield Company is taking orders for these various drinks, are they not? A. No, sir.” The facts are that the Mayfield Company owned those two formulas—the formulas for Celery-Cola and Pepsi-Nola, although the Mayfield Company had various licensees, or agents, nevertheless it had the right to make its scientific compounds, and in Birmingham I made it there for the Company. In every place of business—in Nashville or any place else—I made it for those agents, and then the agents mixed the syrup. On page 46 of the Rice record appears this question and

(Deposition of J. C. Mayfield.)

this answer: "Q. Who is Secretary and Treasurer?

A. My oldest son, J. C. Mayfield, Jr." That is a typographical error—my youngest son is J. C. Mayfield, Jr. On pages 53 and 55 of that record appear the following questions and answers: "Q. Is it not a

fact that at that time you had sold out—what was the name of the company you had in Atlanta? A. It

was the Pemberton Medicine Company in Atlanta.

Q. No, the other one, Wine Coca? A. We suc-

ceeded the Pemberton Medicine Company. Q. What

was the name of that? A. Wine of Coca Co." The

facts about that are that the Wine Coca Company,

which was the Eady Company, fell heir to most of the

specialties, and I therefore considered that they suc-

ceeded the Pemberton Medicine Company with re-

spect to the things which they got. In the dissolution

of the Pemberton Medicine Company partner-

ship Mrs. Pemberton took the Globe Flower Cough

Syrup, and the Indian Queen Hair Dye, and maybe

she had some more, and Eady bought everything

else except the Koke. The Pemberton [1888]

Medicine Company and the Wine Coca-Company

were both handled by me. Mr. Eady was my friend

and partner in the Real Estate business and Mr.

Bloodworth was my partner in the Koke business. I

was in Atlanta and Mr. Eady was in West Point,

Ga., so I had active charge of the whole thing. We

first made for Mr. Eady quite a lot of Wine Coca, in

the wine form. Later he suggested modifying the

formula and putting it in the syrup form, as a bever-

age, which we did. I did not pay very much atten-



(Deposition of J. C. Mayfield.)

tion to it, and neither did he. It was not doing very much business and when he decided to put it into a corporation, a corporation was organized under the name of the Wine Coca Company. The Pemberton Medicine Company did not go out of business when the Wine Coca Company was organized; Bloodworth and I owned all of the accounts of the Pemberton Medicine Company. We had accounts all over the country due us, and we had a good many more booked, as well as quite a little stock of manufactured goods, none of which Mr. Eady got. On page 56 of the Rice record, I was asked with reference to the Wine Coca, "Q. Did not you have your son manufacturing this stuff"—meaning Wine of Coca—"in New York or some other place, after having written agreement with these people"—that is the people in Boston to whom the stock in the Wine Coca Company had been sold—, "didn't you have your son manufacturing this stuff in New York, or some other place after having a written agreement with these people you sold out to, making the identical stuff? A. Not the identical stuff. Q. Were you not making it by the same formula? A. No, sir. Q. Was it not [1889] absolutely the same stuff? A. No, sir. Q. What was the difference? A. Quite a little difference." The facts are that my son in New Jersey was making Koke, and I believe at the time we made a little Celery-Cola. Celery-Cola at that time was in its infancy. We had a few customers back south whom we supplied with Celery-Cola and Koke. I am certain about the Koke and believe we made Celery-Cola

(Deposition of J. C. Mayfield.)

too. I was not making the Koke by the same formula as the Wine Coca. The Celery-Cola formula was not identically the same formula as the Koke formula, nor was it identically the same formula as the Wine Coca formula. You ask how I happened to make the Wine Coca and Celery-Cola by formula different from the Koke formula; when we first made the Wine Coca in a syrup form, as a beverage, it did not belong to me. The people who bought it as a tonic wanted to change it to a beverage, and we changed it for them. There was some little changes to be made, which we made, when it was put in the syrup form, as a soda-fountain beverage. The Wine Coca formerly contained largely wine and coca, because old Dr. Pemberton impressed upon me the fact that to retain your trademark, you must use what your label calls for, and consequently I used quite a little of wine, notwithstanding the fact that it was in the syrup form, and fluid extract of coca. I did not make the Wine Coca in the same way that I made the Koke, because it was not the same drink. It was a different drink altogether. It was Wine Coca—Wine. Then the Koke formula belonged to Bloodworth and me, and the Wine Coca belonged to Mr. Eady and associates. I made the Celery-Cola formula different from the Koke formula, because Celery-Cola was a different beverage, and it had celery in it. [1890] There was no celery in Koke. There were other differences between Koke and Celery-Cola, but I mentioned the celery because it stands out prominently. No, sir; Koke never had any prune juice in it. I put prune

(Deposition of J. C. Mayfield.)

juice in Celery-Cola, because prune juice is a very nice flavor, and adds age to the other extracts—smooths it over, and blends it in. During the time I was making these other drinks—Celery-Cola, etc.—I adhered to my original Koke formula in manufacturing Koke. I have always adhered to the Koke formula, until the passage of the Pure Food law, when I modified it a little bit so as to comply with that law. Celery-Cola is different from Koke, in that it contains celery. It is however what the public calls a cola drink. Celery is a very delicate flavor. Chemists tell me that 99 per cent of it is water. It does not last. Celery-Cola was a caffeine drink with a celery flavor, and it would be classified with the “dope” drinks. On page 63 and 64, appear these questions and these answers: “You claim that the Coca-Cola people got Pemberton’s formula, and you were entitled to it? A. No, sir, they bought it from Pemberton. Q. You had been claiming all the time that you had the Coca-Cola formula? A. Not the Coca-Cola formula. Q. Have you not been advertising that you had the formula for the drink the Coca-Cola people claimed? A. I never said I manufactured the stuff.” Well, I hate to explain it, but I will. Mrs. Brown, the mother of my children, was propounding these questions through the attorney on the other side. I had told her often and often that I had lost [1891] the Coca-Cola formula, which is the Koke formula, you might say. She was after all the information she could get about the Koke formula, or the Coca-Cola formula. I had evaded giving



(Deposition of J. C. Mayfield.)

it to her in every way possible. She stated in some of her advertisements and things that she had the original Coca-Cola formula. This letter referred to, addressed to Judge Brown, was written eleven years after Dr. Pemberton's death. If I had given her the copy of the formula, if I had gone to Jersey City and taught her how to make it, she would not have appeared in this case, but not having it and not being able to sell the formula as she wanted to, she appeared in this case and sought all the information possible, and that is why those questions were asked. I evaded them along that line because they were immaterial and did not have any bearing on the case at issue. As before stated, my property was at stake, and that is why I answered those questions along there as I did. At the time this trial, April 19, 1907, she had not a satisfactory formula. She did however, after that in some manner get a satisfactory formula, or rather a formula—I do not know that it was a satisfactory formula—but a formula that made a good cola beverage. I know she got a lot of it in this particular trial, and as Rice had stolen my Celery-Cola formula, I have reasons to believe that Rice gave her a copy of that Celery-Cola formula. I made these answers that appear on pages 63 and 64 of the Rice Record to avoid having to say anything about Koke, and also to avoid having to disclose anything about the Koke formula, believing at the [1892] time that the questions were immaterial and irrelevant to the issues involved in that case. On page 64 of the Rice record appears these questions

(Deposition of J. C. Mayfield.)

and answers: "Q. Don't you advertise that you know how to make and do make Coca-Cola? A. I do not make it. I advertise the letter that Dr. Pemberton's wife gave me, that I once was associated with her husband in the manufacture of Coca-Cola. Q. And you know how to make it before the present Coca-Cola people got the formula? A. I think she stated that to me." The facts are that I did manufacture Coca-Cola before the present Coca-Cola people bought Dr. Pemberton's interest, and I had the Coca-Cola formula. Mrs. Pemberton gave me that certificate,—certified it before a notary public—because it was the facts in the case. You call my attention to the fact that in the answer above quoted I used the present tense: "I don't make it." That is, that I don't make Coca-Cola; I mean there that I did not make and label my goods Coca-Cola, but I did make the same goods and label it Koke. I did not say it there, but that is the facts in the case. The same goods from the same formula. The two distinct differences between Celery-Cola and Pepsi-Nola are that Pepsi-Nola had present in it, Pepsin, and Celery-Cola had celery in it, that is the two distinct differences. The Pepsi-Nola was a different kind of drink from Celery-Cola. It was a cola beverage, but it had pepsin in it. We advertise it as a pepsin drink, good for indigestion. In my cross-examination when I testified in New Orleans the record shows that I said, I paid two thousand dollars for an interest in the Schuylor Vinegar Company; that is an error, it was twenty-two thousand dollars, and there are [1893]

(Deposition of J. C. Mayfield.)

a few other errors I noticed by reading through. There were four or five errors. I gave them to you and you made a little notation on the side, and I thought you had them there. This question Mr. Hirsch asked me as to whether or not I was present at the trial of the Rice case was one of the errors I pointed out to you. I was present at the trial before the Justice of the Peace. I had the man arrested. In my direct examination in New Orleans I was asked about a letter written to me by T. L. Boswell and asked to produce it if I could find it and exhibit it to my testimony in this case. The envelope addressed, in writing, to "Mr. J. C. Mayfield, Pres., Sou. Koke & Dope Company of America, Howard Ave., New Orleans, La.," and the top of it, "From T. L. Bos—" the rest of it is torn off. "after 5 days—" and the rest torn off, and under that in pen and ink appear, "192 Crew St.," and then in printing, "Atlanta, Georgia," is a letter I received from one of the Coca-Cola detectives. The letter addressed to Mr. J. S. Mayfield, Pres., Sou. Koke Co. of America, New Orleans, La., and signed T. L. Boswell, dated September 8th, 1914, is a letter I received from Mr. Boswell through the mail. That is the same T. L. Boswell who testified in this case on behalf of the Coca-Cola Company. I received that letter in that envelope. This is the letter I had reference to in my testimony in New Orleans. The paper marked Exhibit "A" is a carbon copy of my reply to Mr. Boswell. The envelope addressed to "Messrs. Littleton, Littleton & Littleton, Attorneys and Councilors at Law, 1209



(Deposition of J. C. Mayfield.)

James Building, Chattanooga, Tenn.”; attention A. B. Littleton,” bearing post-mark [1894] of “Dec. 19, 7:30 P. M. 1914,” and also the letter contained therein, addressed to Messrs. Littleton, Littleton & Littleton and signed “T. L. Boswell,” was evidently written by the same individual, because the handwriting is the same as that in the letter addressed to me. The signature and the handwriting etc., of the letter dated, “Atlanta, Ga., 192 Crew Street, Sept. 14, 1914,” addressed to Messrs. Littleton, Littleton & Littleton, Attorneys at Law, Chattanooga, Tenn., Attention A. B. Littleton,” and signed “T. L. Boswell,” is the same as in the other exhibits above referred to. The letter dated New Orleans, La., on the St. Charles Hotel stationery, dated Nov. 21, 1914, addressed to Messrs. Littleton, Littleton & Littleton, and post-marked 11-21-14, is signed by the same party. (Defendants here tendered and offered in evidence as Exhibit “A,” the exhibit referred to by the witness in the New Orleans testimony, and as Exhibits “B,” “C,” “D,” “E,” and “F,” the other letters and envelopes referred to.) Referring to the letter from F. T. F. Johnson, filed as Plaintiff’s Rebuttal Exhibit No. 13, I did not comply with the suggestions therein contained. Celery-Cola has never had any nux vomica in it. I did not have to make up any special batch of Celery-Cola, that was different from the regular formula to be analyzed by any chemist. You ask if I can recall why or how it was that Johnson happened to write me a letter of that kind; I have not a copy of the letter I wrote him, but I can explain

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why I wrote Mr. Johnson at that particular time. I had been manufacturing and selling Celery-Cola about ten years, and Mr. Johnson was at that time trying to secure for me a trade mark on Celery-Cola, under the new trade mark law—under the ten year period. I had a business [1895] in St. Louis, that I had spent from twenty-five to thirty thousand dollars on in establishing the trade for Celery-Cola, and I had met with a Mrs. Brooks and a Mr. Jerome, and who I thought would give me a fair, square deal. Mrs. Brooks was left in charge. The contract I had with them would pay me a satisfactory dividend on my investment. I sold them my Celery-Cola compound at a satisfactory price, and after they had been in charge for a few months, it evidently occurred to Mrs. Brooks that she could make her own Celery-Cola for a great deal less money and she got hold of a formula—and undertook to make her own goods—ditched me, you might say. Of course, having spent so much money in introducing my Celery-Cola in St. Louis, I employed the city attorney of St. Louis to protect my rights, and interests. He filed some papers—injunctions I reckon they were—against her. I never was there at any of the trials. I was in Birmingham at the time. I left all this to him. This was preliminary to the main suit. I was notified that the defendants were setting up a contention that Celery-Cola was poisonous and had nux-vomica in it, which was as false as false could be. I wrote Mr. Johnson as to our securing the trade-mark on Celery-Cola, and about their contention. I told him that it

(Deposition of J. C. Mayfield.)

might delay us, or injure us in some way, possibly, in our securing our trade-mark, notwithstanding the fact that we had used it for ten years or more. I do not remember just what I wrote him, but this reply came from Johnson. I did not know what he was going to write, but I have told you in substance what I wrote him. If there was any nux-vomica, or any poisonous, deleterious [1896] substance in Celery-Cola, it was put in there purposely by Mr. Jerome or Mrs. Brooks to rob me of my established trade on Celery-Cola in the City of St. Louis. In plaintiff's rebuttal exhibit No. 21, which is a letter to Anderson and Pogue from me, dated December 18th, 1905, it is stated that my son S. T. Mayfield, assisted me in making Celery-Cola ten years ago, and says, "It was he that made my goods in New York while I was on the road; he manufactured the Celery-Cola while I was in the oil-fields, and knows there is celery and cola in the goods." He had not manufactured the scientific part of it; he only did the mixing. We had a cola compound and had celery extracts, and all those things we numbered. Caffeine had a certain number and those things with the mixing formula, and he would put certain specified quantities to a batch, but he did not make these extracts and compounds. However, he knew what they were, after they were made. They were labeled. For instance, the essential oils—there are several essential oils in it—all labeled "essential oils." Plaintiff's rebuttal exhibit No. 38, is a letter to Charles J. Pogue, City, dated Birmingham, May 25th, 1904, and is signed J. C.



(Deposition of J. C. Mayfield.)

Mayfield Manufacturing Company, per J. C. Mayfield, Pres.," and reads in part as follows: "We have just received a car load of pure apple cider, We guarantee these goods to be absolutely pure and free from revenue license. Sell these goods to the best customers only as the profit is short." Plaintiff's rebuttal exhibit No. 41 is a letter to "Dear Mr. Pogue," dated Birmingham, November 16th, 1904, and is signed by me, and says, among other things, "Your telegram received. We did not guarantee [1897] that our goods was not intoxicating, nor did S. T., and I do not suppose Adams did," etc. Now, Exhibit 38 refers to exactly what it says, i. e., pure apple cider. At that time there was no revenue license required on pure apple cider, and I had information from the Revenue Officer that my customers would not be required to secure a revenue license on pure apple cider. Consequently, I wrote Mr. Pogue and my other salesmen that pure apple cider was free from revenue license. This other letter, Exhibit No. 41, was written to Mr. Pogue, at Columbus, Miss. I remember it very well. Columbus, Miss., was at that time a prohibition town, and we were handling from the breweries in Birmingham, a near beer, which they claimed did not require a revenue license. It was known as "Hop Ale." I did not make it, and of course could not guarantee it, but it was then in Birmingham and Columbus, just like it is in Chattanooga, to-day. You have got neer-beer in this town, and in Atlanta, and everywhere else where there is prohibition, and I instructed my men not to guaran-

(Deposition of J. C. Mayfield.)

tee that because I did not manufacture it, and because I felt the people who handled near beer might possibly handle something a little bit stronger. I wanted to stay on the safe-side and would not guarantee it because I did not manufacture it. That explains Exhibit 41. Plaintiff's Rebuttal Exhibit No. 43, is a letter from me to "Dear Pogue," dated January 11th, 1906, which contains this statement: "I sent five gallons C. C. to you yesterday for Baxter. You will find it /o. k. just as it is for I am testing every batch that is made. S. T. is doing nicely in N. C. and S. C. on C. C. extracts." That letter was written [1898] because while I had always done the scientific compounding, I had theretofore left the mixing to my son but in as much as we were having a lot of trouble in St. Louis, I did this mixing myself, so that I would know and could say it was mixed according to the formula. Then, I could say it was o. k., as I did here. I did both in that instance. Used both the scientific and the mixing formulas. You ask why I was testing it after it was made; well, these essential oils and fluid extracts that we used in our goods, often become weak and deteriorated, and you have to bring them up to the standard. If anything was not up to the standard, according to my test—if it become weak by age or exposure—you know when essential oils are exposed to the air they become weak; you have to hide them in the dark—and by my years of experience testing and experimenting, and tasting, if there was anything

(Deposition of J. C. Mayfield.)

lacking I could bring it up. I wanted to retain my trade in St. Louis, and that was why I was testing it, to know it was satisfactory to myself. I did not put any more celery in that batch than I had always put in Celery-Cola. I did not leave out the cocaine. The cocaine got in Celery-Cola from the fluid extract of coca, just as it gets in to any beverage that has the fluid extract of coca in it. Plaintiff's Rebuttal Exhibit 47, is a letter from me to C. J. Pogue, at St. Louis, dated, Birmingham, Ala. 4-2-06, and among other things contains the following: "It may be that Jerome will want me to go onto St. Louis. If so, I presume it will be best to meet in East St. Louis, to avoid the depositions they would [1899] want to take in the event we failed to make a settlement." I want to avoid any depositions because old Pogue was up there looking after my interests, and he was writing me most every day about the trouble, and he wrote me that Mrs. Brooks and Jerome had bought a formula and were manufacturing Celery-Cola from their formula, but that it was not satisfactory; that they were losing their trade, and had set up in their answer to our suit that my goods were poisonous, and that they did this in order to find out my formula. They wanted to get me somewhere and get my deposition and force me to say what was in Celery-Cola, and that was what I wanted to avoid. Pogue wrote me that they were going to try to get my formula from a bank in St. Louis, where I had it deposited, and that if they did under the pretense that my goods were poison-



(Deposition of J. C. Mayfield.)

ous, they would get my identical formula and go on and make Celery-Cola and rob me of my established trade there. That is all there was about those depositions. That suit was finally compromised. The dirty work ceased and Jerome and Mrs. Brooks went on with the business and lived up in a measure to the contract. The termination of the case was entirely satisfactory. When their contract was up I contracted with some one else, who have been bottling ever since, and are bottling Celery-Cola to-day—he is a nice fellow, and has given me no trouble in the world. In Plaintiff's Rebuttal Exhibit No. 12, in the last paragraph appears this passage: "Box C. C. shipped to-day is marked 'P' with a diamond around the 'P,' so that you can know this is the box you want. Have your chemist look for cola and celery. They would find eighteen ingredients if they could analyze, but they are in small quantities." The [1900] reason why I marked and shipped that special package in this manner was because this suit was pending, and Celery-Cola had been accused of having nux-vomica in it. If any of it ever did have any Nux-Vomica in it, it was put in there by those parties from St. Louis, and I was shipping that Celery-Cola extract to Baxter and to Pogue, and others, and this particular batch was to be analyzed by the chemist there, and I marked it with that "Diamond P," so that I could stand my ground and swear I had marked that particular package. Of course I could not identify the extracts without analysis. I could not identify a jug unless it was

(Deposition of J. C. Mayfield.)

marked, and I made that particular distinction or mark so I could say that was the package that I expressed. At the same time I had a chemist in Birmingham, Alabama, to come to my office and get some Celery-Cola extract. It was up from my original formula without and additions or subtractions—straight—fair—square goods. In the letter filed as Plaintiff's Rebuttal Exhibit 28, dated February 13, addressed to "Dear Pogue," and signed "J.C.M.," occurs this passage: "There is another feature in the Baxter case I did not care to dictate to Carl, that is, if we antagonize Baxter, he might go in business in competition with us. He could manage through Mrs. Brown, or some one and would get a formula that would make an imitation." The reason why I did that was because I did not want to dictate this to Carl, he was my baby boy, and Mrs. Brown was his mother. I have never, in all my life, said a thing in my children's presence that would make them think less of their mother. That is the reason why I excused him and wrote that myself. Notwithstanding [1901] the fact that she had treated me wrong, I was not going to let my children accuse me of saying or doing something that was not, as I considered, right and proper as their father. She always had a right to see her children and never have I said or written a thing that they could in the very least accuse me of not being right. Plaintiff's Rebuttal Exhibit No. 63, seems to be a circular letter sent out from Nashville, giving the prices of Celery-Cola, Pepsinola, Peppo-Ade, and Vig-O. That was

(Deposition of J. C. Mayfield.)

not a complete price list. My son got the idea of these four specialties and he advertised it in *Bottler's Gazette*, "Mayfield's Big Four"—that is why he mentioned it, he got it from the "Big Four Railroad." Among the other things we were making at that time were Blue Ribbon Ginger Ale, Koke, and lots of the flavoring extracts that bottlers use, such as lemon, orange, vanilla, pine-apple, strawberry and those things. but the four articles mentioned were what we called the "Big Four." He picked them out of the list we were using and thought he would make a run on those particular flavors. Plaintiff's Rebuttal Exhibit No. 14, is a letter from J. C. Long, Chemist to Mr. C. J. Pogue, St. Louis, dated Birmingham, Ala., December 18, 1905, in which appears the statement: "There is not a trace of nuxvomica in the bottle of extract marked 'J. C. Mayfield Manufacturing Company of Birmingham Alabama,' or in the bottle of extract marked 'Celery-Cola Company of Birmingham, Alabama.' " And, also a statement that while he is not able to prove the presence of celery in the sample analyzed that "A chemist makes a bold statement when he claims there is no celery in it." I remember this very well. This was right along there when I was having [1902] trouble in St. Louis. And this extract that Mr. Long got was out of the same batch that I sent to Mr. Pogue, and marked "Diamond P," the question in St. Louis, as I understood it, was that there was no celery and no cola in Celery-Cola—particularly no celery. If I had wanted to load a



(Deposition of J. C. Mayfield.)

sample for a chemist I certainly would have loaded it for Mr. Blum, in Birmingham, but he came to my place of business and got it as he would get it any where else, just out of the batch, the same as I sent to Mr. Pogue. But he stated to me that celery was a very difficult flavor. I believe he said there was ninety some odd per cent of it water, and he could not find it from analysis, but he could find it from flavor and odor; and I did know it was in there. I sent the letter from F. T. F. Johnson to Pogue at St. Louis, because I was thinking then of associating Johnson with Mr. Anderson, my attorney. Mr. Johnson was a patent right attorney or trademark attorney, and I thought maybe he might assist Mr. Anderson, and I did not like to go around Pogue, so I just sent it to him instead of Anderson—told him to turn it over to Mr. Anderson. I knew Mr. Anderson was a high-toned gentleman, and he would do absolutely nothing except what was fair, square and legal, and what a gentleman ought to do. I paid really no attention to the suggestions made in Johnson's letter. I had never seen F. T. F. Johnson up to that time. All my relations with him had been through correspondence, only. Somebody gave me his name as a trademark attorney and I wrote him, and he at that time had my Celery-Cola, trying to secure a trademark on it, which he did a little bit later. Even at this time, after these letters [1903] which I wrote have been produced here in this case by C. J. Pogue, I have not been able to discover any of my later correspondence, stationery, price lists, bill heads, or

(Deposition of J. C. Mayfield.)

anything of that sort, or any of the products I was making back there in 1907 and before. C. J. Pogue was a sort of detective for me in assisting me in getting up my witnesses in Birmingham, when the defendants in this case were taking their testimony there. He knew who were employed by me, and in as much as he had made Birmingham his home after I left there, I thought he would know where these different employees lived, and I employed Pogue to assist me in locating them. Mr. W. F. Norman, of Chattanooga, Tenn., also assisted in getting the witnesses in Birmingham. I do not think Mr. Pogue got any witnesses any place but in Birmingham. Pogue did not mention to me, nor did he intimate to any one in my presence that he had these letters, which he has produced, or any documents of any kind or character referring to the Koke business, or the Celery-Cola business, or any business in which I was engaged. Yes, I know W. M. Smith, and I saw him in Birmingham last February or March of this year, when the defendants were taking their evidence there. I met him on the street. I knew him. He used to work for me. I asked him how he was getting along, and he said nicely. I asked him what his business now was, and he said he was chauffeur, driving a car for somebody, and he asked me if I was going to move back to Birmingham and open up business, and I told him no, that I had a law suit, that I was taking some evidence here today, and I said, "I am glad I met you, maybe you can help me some." I asked him if he remembered

(Deposition of J. C. Mayfield.)

the different flavors that we bottled and manufactured while he was with us in Birmingham, and he said he did, and he called [1904] them over and he remebered Koke, he said that he remembered it. I then said, we are taking evidence up here at the Tutweiller Hotel, and gave him the number of the room and asked him to go up there and make a statement to my attorney. He went up there but did not make himself known. After I got my lunch I went up there and conferred with my attorney, and he said he had not talked to Smith, so I introduced my attorney to Mr. Smith and my attorney asked him if he remembered our manufacturing Koke, and Smith said that he did. I certainly did not offer to give him a job in New Orleans, for his testimony in this case and I did not make any other inducements to him as a return for testifying. I do not know John L. Bevel, is he one of the negroes down there. We had so many little negroes coming and going that I do not remember. I never did present John L. Bevel with a little slip of paper about the size of a postage stamp with the word "Koke" printed on it. I did not see John L. Bevel in Birmingham when the defendants were taking their evidence there. Yes, I remember old Dick—the negro named James W. Dickson. He worked for me in Birmingham in 1903 and 1904. He was a drayman at first and helped around the place of business like any other negro I hire, mostly as a laborer. I had him arrested for stealing something around there. He was the negro who was mentioned



(Deposition of J. C. Mayfield.)

in the Rice record, as being an accomplice of Mellville Rice. He was arrested along with Rice and put in jail. I think maybe we did not prosecute him—I do not know about that—but he was put in jail for stealing things around there. I do not think I know a negro by the name of Sam H. Brewer. I know a negro by the name [1905] of Tom Anderson. Old Tom Anderson worked for the Schuylor Vinegar Company, and I had an interest with Estes, but I was not there and at the same time he worked for the Celery-Cola Bottling Company. I had no interest in it at that time, but I did have an interest in the Schuylor Vinegar Co. After I went back to Birmingham and bought out all those interests, I did not keep old Tom Anderson. He may have been there a week or ten days, but it was a very short time. I had help of my own and let him go. He bottled and mixed syrup for the Celery-Cola Bottling Company when I first knew him there. He had a son named George Anderson, and old Tom was so very hard to get along with—abusive to his son, and George was not there but a few days after I got there. Old Tom ran him off after I got there. George was there with his father prior to my going with the Schuyler Vinegar Company and he was with the Celery-Cola Bottling Company, which was owned by Ensley, Harper, and some other parties that I do not recall. He may have been with the J. C. Mayfield Manufacturing Company in previous administrations. I do not know about that, because I was not there. You ask me to explain how the

(Deposition of J. C. Mayfield.)

bottled goods were sent out of my place by draymen, and what their chances were for observing the labels: Well, I had my own drays, I was within a stone's throw of the depot. I had largely a wholesale business although we had quite a little bit of city business. The soda-water business at that time with me in Birmingham was divided into two districts, South Birmingham and North Birmingham. There was an old negro there named Mac. Crawford, who ran a public dray and who lived out on the south side and another negro named Walter Thomas who lived on the north side. And when my [1906] city salesmen would secure orders away out there through the day,—we would get telephone orders through the day for cases of assorted goods. I had arrangements with these two negroes to take it out as they went home of evenings, which they could do without any cost to themselves, as they had to go home any way, and very much cheaper than I could send it by my own drays. In this bottling business I fell heir to or bought out, all the city cases were stenciled. In other words, the manufacturers of the cases used a die, which made an imprint on the side of the case, "Mayfield's Celery-Cola," these were the cases that held my soda-water for the city custom. The cases in which the bottles were placed. When these negroes would come to my place of evenings, as they would do every evening, to know if we had anything to go out, we would load them with the cases that were to go out. Then all they saw or paid any attention to was how many cases,

(Deposition of J. C. Mayfield.)

and those cases were stenciled "Celery-Cola," naturally they would have thought they were taking out Celery-Cola, whereas they were doubtless eight or ten flavors in a load, and they evidently thought that it was Celery-Cola. I did not explain to the negroes—there was no reason why I should—that there was Koke, Celery-Cola, Vig-O, Lemon, Orange, etc., in those cases, because it was none of their business. [1907] And that is where it impressed upon those negroes that they were handling Celery-Cola; if they left out a bottle, the bottle had Celery-Cola, the case had Celery-Cola, stenciled or printed on the side—I had a standing arrangement with them to take it out to the little suburban grocery stores. The negro bottle-washers who washed the bottles, did not have anything to do with the label of the bottles. When I bought the Celery-Cola Bottling Company's business out, all the bottles that I found or bought there at that time, had Celery-Cola [1908] blown in the side of the bottle. It was the Celery-Cola bottling business. Mr. Britton bought the bottles and the cases, and he was pushing and trying to make a big run on Celery-Cola. The negroes who washed the bottles had Celery-Cola before them from morning until night, and the bottler who bottled the goods had celery-Cola before him, and the cases in which he put the bottles had Celery-Cola on them, and evidently those negroes thought that everything that went into the cases was Celery-Cola—if they could read. If they could not read they would see the same old sign. They were working for the Celery-



(Deposition of J. C. Mayfield.)

Cola Bottling Company, handling a Celery-Cola bottle, and putting it in a Celery-Cola case, and as a matter of fact, eight or ten different flavors were put in those different bottles. This man Harper who was part owner in the Celery-Cola Bottling business stayed on there a month or two after I bought him out, and wound up the business of the partnership. They had some outstanding claims, and some checks coming in through the mail, and some collections that he wanted to make, and I gave him a nominal salary. I do not just remember what it was, but it did not amount to very much. Since he was looking after his own collections, I thought he might as well look after collections for me also. Of course, I had customers in the same locality as he had, and he hung around the place in that capacity after I bought them out about a month, helped around the store a little bit, in other things but I do not remember just what. He was not there very long. This young man Ensley was never employed by me. He may have been with Britton, when he ran the Celery-Cola business, or the J. C. Mayfield Manufacturing Company, I believe he was with [1909] Mr. Fox, who bought out Mr. Britton, Mr. Ensley left in the latter part of 1903. He had to leave. Shall I state why? Well the facts are he came to me and explained—which was true, it developed—that he had deceived an orphan girl there and her uncle came to my place of business and conferred with me and I told Mr. Ensley about it and he left. I have never seen him from that time

(Deposition of J. C. Mayfield.)

to this. I knew, however, that he had come back to Birmingham, before I was taking my direct evidence, and if he had been with me and had known anything about my business and my Koke, I certainly would have had him as a witness, but knowing that he left under those conditions, before I bought out the bottling plant, and knowing, too, that he did not know anything about it, I did not look for him as a witness. Now, I would like to explain why old Pogue did not go on the stand for me in my direct examination. I had him employed looking up my witnesses and we found, we thought, enough convincing evidence, and it was you, Mr. Littleton, who asked me not to put him on, if I remember, and we let him go. [1910]

Redirect Examination by Mr. HIRSCH.

Q. 881. You stated in your examination by Mr. Littleton here that Celery-Cola was not identical with Koke; tell me the difference between the two, will you?     A. I could not do that—

(Mr. LITTLETON.—We object to that question because it would involve disclosing the formula for both those drinks, and we advise the witness he need not answer.)

I will not answer.

(Mr. HIRSCH.—I move to strike the entire cross-examination, and certainly that part of it that said Celery-Cola was not identical with Koke.) [1911]

**Testimony of C. A. Meserve, for Defendants.**

C. A. MESERVE being called as a witness on behalf of the defendants and first duly sworn, testified as follows:

**Direct Examination.**

My name is Charles A. Meserve. I reside in Tucson. I am a Chemist. My undergraduate work was at the Massachusetts Institute of Technology and my postgraduate course in Germany. I am director of the state laboratory in the State of Arizona. I have examined a number of samples of Coca-Cola syrup for the specific gravity, caffeine, phosphoric acid, alcohol and the so-called coca tannin reaction. I have in the case of specific gravity, the caffeine, phosphoric acid and alcohol found certain variances I think I would say—for instance, the specific gravity varies within certain limits within what you might call industrial limits. These limits for specific gravity vary from a minimum of 1.248 to a maximum of 1.273 with the exception of one sample known as bottler's syrup, where specific gravity was 1.2965. That was the bottler's syrup—delivered as such. The caffeine determined by the method which is given as the official method and subjected to the two methods of purification varied between a minimum of .1528 and a maximum of .193. The phosphoric acid expressed as the pentoxide P<sub>2</sub>O<sub>5</sub> varied from a minimum of .217 to a maximum of .245. These, of course, I am giving are percentages. The amount of alcohol present varied from a minimum of .68 of 1% to a maximum of .96 of 1%. I might state



(Testimony of C. A. Meserve.)

that this one which has the maximum quantity showed slight evidences of fermentation. The fermentation was very slight but may possibly have been sufficient to have raised the alcohol contents .2 of a per cent. The coca tannin was examined by me by the so-called ethyl acetate extraction method in which two successive operations of the Coca-Cola syrup, extracting the first portion with ethyl acetate, making the separation, using that same ethyl acetate for a second portion of Coca-Cola syrup and increasing or adding fresh ethyl acetate to make up for what had gone into solution, so that I shook up a bottle with [1912] approximately 150 cubic centimeters of Coca-Cola with about 75 cubic centimeters of the ethyl acetate. This ethyl acetate I evaporated to dryness, took up the residue in water and I made the four tests which have been used for that, first, with the iron chloride, second with lead acetate, third, with cinchonine sulphate, and fourth, with gelatine, gelatine solution. I got no results whatever. I got no reaction on adding, for instance, ferro chloride to a small portion of this aqueous solution. The only change was the slight change in yellow color which you get from the addition of the iron. The solution remained perfectly clear and then on standing a couple of hours there was no precipitate. In the case of the lead acetate, there was no change noticed other than the change which would come from  $\text{CO}_2$  in the air, as shown in a control test where I used lead acetate in the same amount of water. In the case of the lead acetate

(Testimony of C. A. Meserve.)

test, I used boiled water, fresh boiled, tested water. As a result of the analysis, in my opinion, these variances are sufficient to make it very possible to have a number of other syrups which were not Coca-Cola but which, notwithstanding, would fall within these limits—might even fall within all these limits—that is, the limits for the specific gravity, the caffeine, phosphoric acid and the alcohol. The failure of these samples to yield or to react when treated with four agencies indicated either that the method has no value whatever or that it requires certain details of technique, so that it is not a method which is of universal application. It might be quite possible for me to take ethyl acetate and Coca-Cola and by extensive experiments find some method—some little trick in the manipulation whereby I could get results from it. It might be, for instance, since the ethyl acetate is slightly soluble in water. The tannin is soluble in water, soluble in ethyl acetate. It might be possible on long [1913] continued experiments to find out some ratio between the miscible solvent and the Coca-Cola whereby it might be used as a medium and extract the tannin. In my opinion, from what we know about it, I know of no tannin which would not react with one or more of these reagents. If the commercial coca leaves on the market in this country erythroxyton coca leaves, ground them and rendered them alkaline with the proper solution, added sawdust to them or mixed sawdust with them and then extracted those leaves with toluene, the toluene would take out the cocaine,

(Testimony of C. A. Meserve.)

the waxes which are present, anything of a fatty or oily nature which might be present in the plant itself. What it actually contains, I can't testify to, because I haven't made the extraction and examined that extract. In making caffeine tests on this Coca-Cola syrup, testing it as to its percentage of caffeine, the first step is the shaking of the Coca-Cola syrup with chloroform. The official method calls for an extraction with five successive operations of chloroform. In order to play safe, I extracted in each case with chloroform, shaking without stopping anything more than a momentary stop for for fifteen minutes and I did not extract with five portions but with six successive portions of caffeine—six successive portions of chloroform. The chloroform was filtered, the filter rinsed with chloroform and evaporated. This is under certain conditions by certain people considered pure caffeine. I considered it as such and then to insure the fact that it was pure I subjected it to a solution in or rather I dissolved it in a dilute solution of sulphuric acid, which I then rendered alkaline with ammonia and extracted with chloroform. The evaporation showed a slight loss in weight, so then I subjected it to the further purification with the potassium iodide solution, forming an iodide precipitate, a more or less indefinite compound, frequently spoken of as proto-iodide of caffeine, allow this to [1914] separate over night, filter, wash with two portions of the potassium iodide solution of iodide and after that precipitate and decompose



(Testimony of C. A. Meserve.)

and put the same in the solution with sulphurous acid. This sulphurous acid was a chemically pure acid, which I made myself in the laboratory from pure sulphite, pure sodium sulphite and pure hydrochloric acid. This sulphurous acid solution of the caffeine was then rendered alkaline and extracted with four portions of chloroform and evaporated and the residue weighed and I found a very material diminution in the weight—what I now considered the absolutely pure caffeine and what I had designated in my notes as the crude caffeine from the first separation. I extracted the caffeine from Coca-Cola syrup by means of the six chloroform shakings and then evaporated the chloroform and weighed the residue. The first weighed more than the pure caffeine which I finally got at the end of the purification process. It indicated either that the first extraction was not pure or that this method of purification permitted of decomposition and loss so that the final quantity was not the complete quantity. My opinion is that the loss was due to both—that the first was not entirely pure and that during the successive stage there may have been some action in which a certain amount of the caffeine was decomposed. I preclude all possibility of mechanical loss. I might state right here that all these tests I made were made with identically the same chemicals—same chemicals and temperature and made by me, so that my results are absolutely and strictly comparable.

(Testimony of C. A. Meserve.)

Q. Suppose, Doctor, you had a syrup now composed of sugar, caramel coloring, phosphoric acid, lime juice, caffeine, glycerine, water and flavoring compound composed of oil of lime, oil of cassia and two or three essential oils like that dissolved in alcohol added to the product and then you used in addition to that an ingredient put into the syrup which was made as follows; take [1915] 380 pounds of coca leaves, erythroxylin coca leaves, ground, rendered alkaline, mixed with sawdust and extracted with toluene, then steamed until all the toluene was driven off, then to that product which then resulted after the toluene was driven off, what was left of the leaves, you added 125 pounds of ground kola or kola nuts mixed that up and then extracted that with dilute alcohol of the strength of say 20% and then took that extract from the exhausted coca leaves and this kola nut, mixed and put that into 909 gallons of dilute alcohol and then took between sixteen and eighteen gallons of that product and put it into a batch of the syrup made up of these other things, a batch which when all the things put together made 1250 gallons of syrup, what would be the description of that product, what would accurately describe that product in your mind?

A. I couldn't answer that question without knowing personally the character of this alcoholic extract which is obtained from the treatment of the spent—from the treatment of the extracted coca leaves and the kola nut mixture.

Q. Well, suppose, Doctor that is was shown that

(Testimony of C. A. Meserve.)

the alcohol extracted from that got absolutely nothing from the coca leaf of any physiological value or of any value for any purpose and that it got only minute traces of caffeine from the kola nut so minute that it was very difficult to detect, would a syrup of that character be properly described by calling it Coca-Cola or a coca and kola product?

Mr. HIRSCH.—I object to it on the ground that it is calling for a legal conclusion by an expert chemist. That is for the Court.

The COURT.—Sustain the objection.

Mr. SLOAN.—We take an exception to the ruling.

#### Cross-examination.

Lemon extract to be standard requires, if I remember correctly, a strength of at least 80% to take 10% of oil in solution. Vanilla [1916] if I remember correctly, 50% alcohol will remove—strawberry is an imitation. In order to make up all flavoring extracts alcohol is used commercially in most cases. In some cases you can use aqueous solutions. You can not get vanilla extract without alcohol or a true lemon without alcohol. I analyzed a Coca-Cola syrup. If you take one ounce of that syrup and diluted it with six or seven ounces of water and this syrup and alcohol at .68 and dilute it with six or seven ounces you get six or seven times the amount of alcohol in the syrup. It is I consider an immaterial quantity as far as the action is concerned. That is simply used as one of the constant factors I determined. I do not know when they commenced



(Testimony of C. A. Meserve.)

using chloroform for the extraction that I first used on Coca-Cola syrup. I haven't any idea. I never knew about the method at the time they were using alcohol—if they were using alcohol. I made no confirmatory test, because I was using the official test. That is the test—the method of separation which is adopted by the association of Official Agricultural Chemists. I would think that would bring down theobromine. That is closely related to caffeine. In order to determine whether it was theobromine or caffeine you would have to separate, which I didn't do.  $\text{H}_3\text{PO}_4$  is the ordinary phosphoric acid of commerce and what the chemists ordinarily gives as phosphoric acid. It is phosphoric acid that has lost one molecule of water, that is, considering the valence, the first acid is  $\text{H}_5\text{PO}_5$  and that loses one molecule of water and gives  $\text{H}_3\text{PO}_5$  and that phosphoric acid, if treated at a proper temperature will give up its hydrogen and more oxygen and forms  $\text{P}_2\text{O}_5$ . Barring possibility of numerical errors and I think there are none, .217% of phosphoric pentoxide of the phosphoric oxide would correspond to .299% of the phosphoric acid. I used approximate values for my atomic weights, that is the 21 for phosphoric and then 16 for oxygen and 1 for hydrogen. I should use 1,006 for hydrogen. I used the folding one. .299 is practically .3. The [1917] most important characteristic of the coca leaf apart from the ordinary constituents that you find in any plant life is cocaine. That is the alkaloid. It contains besides that some mineral. It contains chloropyll, starch,

(Testimony of C. A. Meserve.)

cellulose, traces of sugar, some mineral matter. All leaves have a certain per cent, extremely slight, of a waxy or resinous material. I do not know that I would care to specify more. There are a number of other things in minute quantities that you find in any plant life. It contains a number of things. I am not prepared to say it contains any fat. Probably. Practically all leaf matter has minute traces of fats, oils, or waxes. I would assume it contains coca-tannin. Tannin is a normal ingredient of plants. I have not made any extensive examinations of the different types of tannins.

#### Redirect Examination.

I have tested Coca-Cola syrup. I am not acquainted with the kola nut. I have compared the aroma of the Coca-Cola syrup and the aroma of the flavors from Coca leaf, and I noticed no resemblance. Nothing characteristic in the Coca-Cola syrup of the coca leaf. I noticed one flavor predominant in Coca-Cola syrup—to me a musty lime juice flavor with the acid more or less characteristic of phosphoric acid or citric acid, a slight strengthened acidity.

#### **Testimony of J. J. Kessler, for Defendants.**

J. J. KESSLER, being called as a witness on behalf of the defendants and first duly sworn, testified as follows:

#### Direct Examination.

I am thirty-nine. I reside in St. Louis. I am a consulting chemist. I graduated from the Rose

(Testimony of J. J. Kessler.)

Polytechnic Institute of Indiana in 1897 and later from Washington University in St. Louis, where I got my doctor's degree a few years later. In 1897 I worked in the research department of the General Electric Company. From there, I came to St. Louis and worked with the Wagner Electric Manufacturing Company for a couple of years and then opened a laboratory, where I have been doing a general consulting work. [1918] I am also interested in chemical manufacture. I do a general line of chemical work. For instance, at the present time, I am consulting chemist for the Missouri Pacific Railroad Company, Tisdale Engine Company, Wagner Electric Manufacturing Company and a number of other manufacturing chemical concerns. My experience in chemical research has been since 1897. I have made some analyses of Coca-Cola syrup. It is a syrup that consists essentially of 53% sugar, it is colored with caramel coloring, there has been added to it phosphoric acid, lime juice and certain other flavoring matters, principally vanilla. I have made a test of Coca-Cola syrup to ascertain what flavoring it has. In my opinion, the taste of Coca-Cola is essentially the taste of lime juice. The taste, of course, is modified slightly by the vanilla and other materials, but the main constituent of the taste outside of the taste of the syrup, of course, which you taste, the sweetness of it, outside of the presence of the phosphoric acid which you taste, that is the sourness of it, the principal flavoring substance in it is the taste of limes. Coca leaf is similar to the tea



(Testimony of J. J. Kessler.)

leaf in a great many respects. It is about the same size and color of the tea leaf. It contains not much of any flavoring substance. It has not much odor or flavor. I have a specimen of coca leaves here. (Showing bottle, marked Defendants' Exhibit No. 232.) These are unground coca leaves which I purchased in St. Louis from the Meyer Brothers Drug Company. Those leaves have a slight characteristic odor of coca leaves—something like tea. The coca leaf is a tropical leafy substance that comes from Africa. There are two different varieties. It is not grown in this country as far as I know. The coca leaf, besides the cocaine, which it normally contains to the extent of about  $1\frac{1}{2}\%$ , contains small amounts of an essential oil, a fatty substance, a wax, a chlorophyll extractive matter, which has not any individuality at all. It simply comes out when you boil the leaves with water, it is a starchy substance or a gummy substance. The [1919] thing which gives it the odor is the essential oil in it. In general the two leaves, coca and tea, taste very much alike. If you make an infusion of coca leaves in a similar way that you make an infusion of tea leaves in making tea, you get a similar beverage. It has somewhat of the bitter taste of tea. It has somewhat of the essential oil taste of tea but it is very comparable with tea, both in its chemical nature and in its general makeup excepting that it contains cocaine instead of the caffeine which tea contains. It is a matter of common practice to keep tea closed—to keep it away from the air. If it is exposed to the

(Testimony of J. J. Kessler.)

air, it loses its flavor to some extent. The kola nut has practically no flavoring qualities whatever. Kola nut is a hard, woody nut. When you chew the nut it tastes like so much hard wood sawdust. It tastes a little bit bitter but has no more flavoring in it any more than hard wood sawdust has a flavor. Perhaps not as much. (Shows bottle, marked Defendants' Exhibit No. 233.) This bottle contains ground kola nuts. It also contains a few of the half nuts which are covered by the kola nuts. It also contains a small phial containing caffein, which I extracted from the kola nuts. (I will put the caffein in as another exhibit.) You cannot taste the caffein in kola nuts. I made an infusion of the mixture of the kola nuts and coca leaves and the fusion tastes very similar to the taste of the coca infusion. The kola nuts make the taste a little more bitter but the taste of the coca leaves predominates. If the essential oils are extracted from the coca leaf by some chemical process, then they are spent as far as the taste is concerned. The thing which gives it the characteristic taste, which gives it the bouquet, which gives it everything, that goes to make the individual taste is gone. There only remains the taste of such vegetable matter which you get by boiling pretty nearly anything up—any sort of leaves up with water. The aroma and bouquet [1920] of the leaves under those circumstances is removed; it is gone. Kola nuts contain about 1½% of caffein. Kola nuts are not used for preparing caffein to my knowledge in this country. I believe

(Testimony of J. J. Kessler.)

the greater amount of caffen which is made in this country is made of tea leaves.

Q. Do you know about how the percentage of tea and kola nuts compare?

A. It runs higher in caffenine.

I have read the testimony of Dr. Casperi in this case as to the method by which this ingredient goes into coca-cola syrup, known as merchandise No. 5. I prepared merchandise No. 5 according to the method described by Dr. Casperi. The bottle marked Defendants' Exhibit No. 234 is a sample of merchandise No. 5 which I prepared according to the testimony of Dr. Casperi. The Toluene extracted from the coca leaves by this method all the oils, fats, waxes and resinous substances found in the leaves. It also extracted much if not most of the chlorophyll. It extracted most of the flavoring principles of the coca leaves. It extracted a large proportion of the cocaine. I found  $3/100$  of a per cent of the cocaine in coca leaves which had been extracted by this process by toluene as against  $60/100$  of a per cent which they contained normally. The color of the toluene extract I got from the coca leaves was a very dark green color, almost black. That color was due to the chlorophyll extracted from the leaves. Chlorophyll is the chemical substance which gives the green color to all green colored plants. I analyzed the toluene extract. Those notes were made by me at the time I did this work. Some of the figures are figures put in by my assistant, but I was present and dictated them when they were put in.



(Testimony of J. J. Kessler.)

The toluene extract which I made contained .188 per cent of solid matter. This is six times the amount of cocaine present in the leaves ordinarily. The five of these parts are things which are not

[1921] Of these five parts they consist entirely of what I call resinoids. That is, they are waxy gums and oils which are not soluble in water, but which are soluble in toluene. The toluene extract consists practically entirely of those two things. That is, one part of cocaine and five parts of resinoids. There is a small amount remaining, extractive, which amounts to a few per cent outside of those two substances. That remaining extractive—well, it is hard to say what it is excepting that it is extractive, which is afterwards soluble in water. It might have small traces of starch or it might be a number of different things. It is not true that toluene extracted from the coca leaf only the cocaine and associated alkaloids. My tests show that toluene extracts six times as much other material as it extracts cocaine. I made an analysis of merchandise No. 5 made up according to this process that I have mentioned from coca leaves and the sawdust, but leaving out the kola nuts. The result was that it contains no gums, resins, fats, waxes or oils. It consists of 48—I will give you the percentages figured on the total merchandise. I started to give it to you figured on the basis of the solid matter, which contains 1.9% tannin and 1.16% indefinable extractive matter, such as starchy substance, gummy substance, sugar, perhaps,

(Testimony of J. J. Kessler.)

all material which is soluble in water. Practically half of tannin and half of indefinable extractive. I made an analysis of merchandise No. 5 made according to the process I have detailed with the coca leaves, sawdust and kola nuts in the quantities specified by Dr. Casperi. Merchandise No. 5 made with kola nuts contains very little more substance than the merchandise made without the kola nuts. The kola nuts have very little extractive of any kind in them. This merchandise consisted of 1.35 tannin and 1.03% of indefinable extractive, contained no gums, fats, oils, wax or resins. The per cent of solid matter in merchandise No. 5 when made without kola nuts contains 2.25% of solid matter. When made [1922] with kola nuts, it contains 2.38% solid matter, the remaining being alcohol and water. Merchandise No. 5 consists of  $81\frac{3}{4}\%$  of water, 15.87% of alcohol. These percentages are by weight. I used the 20% alcohol in making it by volume. It contains 2.38% of solid matter, of which practically one-half is tannin and the other half is indefinable extractive. It also contains  $\frac{27}{1000}$  of a per cent of caffeine, that is .027. If  $27\frac{3}{4}$  pounds of caffeine were used in making a batch of this kind of syrup, 1250 gallons of this syrup, there would be 700 times as much caffeine added as would be introduced by the caffeine present in the merchandise No. 5 made from the kola nuts; .027 of a per cent of caffeine is not an appreciable quantity of it. This would amount in percentages to  $\frac{3}{10000}$  of one per cent of caffeine gotten from the kola nuts as against  $\frac{21}{100}$  of a per

(Testimony of J. J. Kessler.)

cent of caffeine added, or one is 700 times larger than the other. I was simply going to say that you would have to drink 700 glasses to get as much caffeine from a product made entirely from the kola nuts as you would get in one that is made with added caffeine. Coca leaves when they have been extracted with toluene smell spent, and they smell very different from the original coca leaves. They have lost their odor largely. I have a sample of those here, a bottle (marked Defendants' Exhibit No. 235) contains coca leaves mixed with sawdust which have been tracted with toluene. The purpose of using sawdust in the extraction of coca leaves with toluene is to separate the mass so that the extraction is more thorough. Something from the sawdust is extracted in that process. In the latter process after the toluene process is finished and you take up the extraction of the exhausted leaves with alcohol, the alcohol extracts from the sawdust half as much material as it extracts from the kola nuts and  $\frac{1}{6}$  as much material as it extracts from the coca leaves. That material which is extracted from the sawdust is a small amount of tannin and some more indefinable extractive. [1923] I made an analysis of coca leaves, that is, a formal analysis outside of this preparation of merchandise No. 5, and found that the toluene extracts first 4.9% of material. That is the figure from which I based my conclusion that the toluol extracts six times as much other material from the coca leaves than the cocaine present. It



(Testimony of J. J. Kessler.)

should be more nearly eight times, but six times is the figure I gave. After the toluol has extracted 4.9% of material, 95% alcohol extracts 20.2% of other material, and then after that boiling water will extract 15.3% of material, so that the total extractive material in coca leaves, that is practically everything in it excepting the woody fibre, celluious extracts, 46% of the weight of the leaves. The difference in extracting power of 95% alcohol and this dilute 20% solution of alcohol that is used in extracting and making merchandise No. 5 is that the 95% alcohol is a very much more thorough extraction medium. It is practically pure alcohol. It is alcohol that is used—generally used in making fluid extracts in the drug trade. It would be very much greater, take up very much more material than the 20%. If you wanted to get all of the extractive in the leaves that you could get, you would use 95% alcohol. When you had used 95% alcohol, you would get more tannin and you would get more indefinable extractive than you would get when you only used 20% alcohol. I made a determination on the spent residue after merchandise No. 5 has been made from them. I find that 95% alcohol still takes out 8.1% of material, and that after that boiling water still takes out 6.2% of material, so that there is still left in the leaves 14.3% of the extractive matter originally present or  $\frac{1}{3}$  of the total extractive matter originally present. In extracting the leaves with 20% alcohol after the toluene extraction, the extract which you got from

(Testimony of J. J. Kessler.)

that and an infusion of fresh coca leaves, in one case you get all of the things in the leaf which go to make up the taste, and in the other case you have nothing but the tannin [1924] and the extractive matter which contributes practically nothing to the taste if not absolutely nothing. The essential things as far as flavoring is concerned are the essential oils. The tannin goes to make up the body of the taste just as tannin in tea goes to make up the body of the taste, but the individual taste is made up by the—is contributed by the essential oils. I tasted merchandise No. 5. I can't compare it with any other substance. It has no individual taste. It tastes like so much nondescript vegetable matter which has been treated with 20% alcohol. You can taste the alcohol. You get the other individual taste of boiled up leaves. Merchandise No. 5 has not got any body to it. It is practically the body of 20% alcohol. There is only 2.38% of solid matter. It is thin just like 20% alcohol. The rest of merchandise No. 5 is alcohol and water. If in making merchandise No. 5, instead of taking the exhausted leaves or the spent leaves which had been extracted with toluene, I had extracted fresh leaf from the alcohol, or in other words, if it were made with fresh coca leaves instead of spent coca leaves, you still get a dilute merchandise. It would still be about as dilute as it is, but you would get the flavor. You would get a bouquet. That is, it tastes like coca leaves. If you take the fresh leaf, you would get alkaloids. If sixteen gallons of merchandise No. 5 were used in making 1250 gallons of

(Testimony of J. J. Kessler.)

coca-cola syrup, the per cent of merchandise No. 5 in the syrup by volume amounts to something less than 2% ; by weight it figures exactly 1%—one part per hundred by weight. In common chemical results, generally speaking, weights are used, because you can handle weights. You are handling quantity there, so in my figures that I am giving you I am referring to percentages by weight almost entirely. That is now—to every hundred pounds of syrup, there is one pound of merchandise No. 5. The solid matter contributed by merchandise [1925] No. 5 to a hundred pounds of syrup is .002% by weight. That does not contain any of the essential oils or other flavoring material, the bouquet, or either coca leaves, kola nuts or acids. I have shown that that consists approximately of one-half tannin, one-half of indefinable extractive material. The indefinable material has the taste—just like the taste—straw would have if you boiled it up in water. It has no character.

Q. Has it any physiological properties?

Mr. HIRSCH.—I object to that, your Honor. The question is: Has it any physiological properties?

The COURT.—Objection sustained.

The physiological properties of a product are the action of the product on the human system, I would say. This indefinable substance is of the nature of sugar or starch or gum arabic. It consists largely, chemically speaking, of carbohydrates, and it has the same physiological effect as so much sugar would



(Testimony of J. J. Kessler.)

have. It has that much food value, but no drug value. I am not qualified to speak and testify as to the physiological effects of this product we are speaking of as an expert physiological chemist, but as a general chemist who has constantly analyzed drugs and referring to the effect of drugs or the dose of drugs I think I am saying just what a physiological chemist would say.

Mr. HIRSCH.—I object to that, your Honor. He thinks he is saying just what a physiological chemist would say.

The COURT.—The objection sustained. You may qualify him if you so desire.

The taste of a substance is a physiological attribute of that substance in a sense. The specific gravity is not a physiological attribute of a substance in the strict sense of the word. The flavor or aroma of a substance is a common physiological property; that is, a physiological property which is common to most everybody. It does not require a physiological chemist to determine the taste, flavor or aroma of an article. It requires [1926] a chemist that has had some experience in testing tastes and flavors and aromas.

Q. Doctor, state whether or not the flavoring capacity that this remaining extractive you speak of—the quantity of it that enters into coca-cola syrup—could possibly flavor or modify its flavor to any appreciable extent.

Mr. HIRSCH.—I object to that, your Honor. I

(Testimony of J. J. Kessler.)

have no objection now to this witness saying from his experience but for him to come up here and try to testify as to what effect this might have on the flavor as an expert tester, I don't think he is qualified to do it. He can say outright what effect it has on him. The question of taste is a question of personality. He can say as far as he is concerned it has that effect.

The COURT.—Objection overruled.

Mr. HIRSCH.—Exception, your Honor, please.

By limiting the answer to a question of fact, I have added ten times the amount of merchandise No. 5 to Coca-Cola syrup than there is ordinarily present in it, and I find that the introduction of this amount of merchandise No. 5, which amounts to increasing the merchandise No. 5 by 1000%, has no effect whatever to me on the taste of the syrup with the exception that it makes it slightly less sweet and a little less sour, because it has diluted the syrup to some extent, but it has not changed the flavor of the syrup in the least. A bottle (marked Defendants' Exhibit No. 236) is original Coca-Cola syrup which I purchased from a wholesale drug house in St. Louis in its original container. A bottle (marked Defendants' Exhibit No. 237) is the same Coca-Cola syrup to which I have added ten times the amount of merchandise No. 5 which it ordinarily contains. I stated that the syrup was a little less sweet and a little less sour, which is due to the dilution—slight dilution—of the syrup. The gravity of the syrup is

(Testimony of J. J. Kessler.)

reduced slightly by the introduction of this thinner [1927] material. It is reduced from 1.26 down to 1.23. I could not detect any characteristic flavor of the coca in the second sample, exhibit No. 236. It brought out nothing. It added nothing in the taste of the original syrup whatever. The effect of adding to Coca-Cola syrup ten times the quantity of merchandise No. 5 that actually enters into it of water would have the same effect. It would dilute it that much. That is the only difference I noticed. The percentage of solid matter in merchandise No. 5 as compared with the percentage of other solid matters in Coca-Cola syrup, I will only give round numbers, so that it will not be necessary to carry them out. There is 2500 times as much sugar; there is 60 times as much caramel; there is 210 times as much caffeine; there is 60 times as much glycerine; there is 20 times as much phosphoric acid; there is 20 times as much of other flavoring matter; there is 30 times as much lime juice and there is 2,000 times as much water. Those are all in round numbers. Caffeine tastes strong. Caffeine has a bitter taste and has a stronger taste than the solid matter in merchandise No. 5. I cannot distinguish the caffeine in Coca-Cola syrup. The taste of Coca-Cola in my opinion is principally due to lime juice or the taste of limes, besides, of course, the sweetness of the syrup and the sourness of the phosphoric acid. If you would make up a glass Coca-Cola, using say  $1\frac{1}{2}$  ounces of Coca-Cola syrup, there would be  $656\frac{1}{4}$  grains of total matter,



(Testimony of J. J. Kessler.)

including 271.55 grains of water, and 386 grains of solid matter. The solid matter of merchandise No. 5 in 11½ ounces of Coca-Cola syrup is .13 of one grain. I have made twelve determinations of specific gravity and twelve samples of Coca-Cola syrup purchased from twelve different St. Louis drug-stores. I was present when these samples were purchased. They were drawn from the bottle, the gallon jug where we could get them and in one or two cases they were drawn from the keg, I believe. On the keg was the Coca-Cola label. [1928]

Mr. HIRSCH.—We will make this objection. There is absolutely no identification here that he has analyzed Coca-Cola at all. He says he got it from twelve drug-stores and they drew it from a gallon bottle, and sometimes from a keg, and it had a Coca-Cola label on it. I cannot conceive that it is a proper identification. I do not know what was put in that bottle or what was put in that keg. He could have gotten an original package of it from the Coca-Cola company, or had the dealer order an original package.

The COURT.—Do you think the defendants should apply direct to the Coca-Cola company for such as they bought to analyze?

Mr. HIRSCH.—They do not have to do that. This gentleman here is acquainted with the two wholesale drug-houses in St. Louis, but he goes out indiscriminately for samples. Now, it might have been or it might not have been. I don't know.

(Testimony of J. J. Kessler.)

The COURT.—Repeat your statement as to where you got the several samples of Coca-Cola.

I bought them at random from twelve different retail drug-stores in St. Louis. One of them I purchased from the Merrell Drug Company. I did not purchase them all from the same place, because that would give me no information. I was trying to make a statistical study of specific gravity and I took every precaution that I could reasonably take. I went to friends. I had accounts with over a hundred retail druggists in St. Louis, customers of mine I sell, and I know them personally, and I told them, "Now, I want the real stuff," and I left it to their honor to give me the real stuff, but the packages were all broken in the case of the retail druggists. The package was unbroken in the case of the wholesale druggists. They didn't have any previous warning of my approach when I went there. They could not have substituted something else. I said, "I wanted to get a sample of a few ounces of Coca-Cola syrup from you. I am making some tests." They know I have a laboratory in St. Louis, and they know the business I am in. There wasn't any objection raised in [1929] any case. I offered to pay them for it.

The COURT.—Objection overruled.

Mr. HIRSCH.—Exception.

The lowest result I got was 1.2398 and the highest result I got was 1.2689. Outside of the low result, the rest of the results ran between 1.2603 and 1.2689 or in round numbers between 1.26 and 1.27. Those

(Testimony of J. J. Kessler.)

gravities were made at a temperature of 26 degrees a centigrade. I have made test of the tannin in coca leaves and other tannins to determine how they act with these four reagents of iron chloride, lead acetate, cinchonine sulphate and gelatine that Dr. Fuller used in making his tests. I have read Dr. Fuller's testimony as to how he made those tests. I pursued the method adopted by Dr. Fuller and testified to by Dr. Fuller in every detail where he gave details. Where he did not give details, such as strength of solutions, I used the Pharmacopoeia strengths. These tests were made, your Honor, to give me some information as to the logic of these tests in identifying the tannin which comes from the coca and the tannin which comes from kola as substances of an individual or distinct character or whether these tests are simply very general tests which apply more or less to all vegetable substances containing tannin. The tests look rather imposing on the face of them but they are really very simple. They are all tests where some reagent is added to a solution of the tannin, which is prepared from the coca leaf or the kola nut, as the case may be, and where some colors are produced which serve to identify the substance as tannin and perhaps to identify them as some particular tannin. Now, I first took coca leaves and made an infusion of them with water, boiled them with water, and made an infusion something like tea infusion and then I extracted that infusion with ethyl acetate, which is a chemical used by Dr. Fuller in separating tannins from Coca-Cola



(Testimony of J. J. Kessler.)

syrup. The thyl acetate tends to separate the tannin from the balance of the syrup or from the other things present in the coca leaves. [1930] Of course, Coca-Cola syrup has a very large percentage of sugar and we are looking for something here which exists only in a very fragmentary or minute amount and this ethyl acetate test is designed to separate the tannin once for all and then make some tests on it to disinguish it. There are four tests mentioned in individualizing or attempting to individualize ordinary tannin. The first test is where a solution of ferrochloride is added. Iron salts, generally, when treated with tannic acid, produce dark colored substances. This is the principal made use of in making ink, for instance, which is a preparation made from tannin substance and iron solutions. Tannins generally give dark green, brown, dark blue colors. It is a general test for tannin. The question remains whether we can find a particular tannin with it. Of course, I have mentioned these different colors, dark green, dark blue and brown, and it is true that the tannin in some particular plant will give either one or the other of these colors. For instance, here is an infusion of kola nuts extracted with ethyl acetate. Exhibit No. 237 I treated with ferrochloride. The result is,—I would call it a dark brownish—greenish brown, the brown predominating. Another test which is used in the treatment of tannin substances is lead acetate. Acetated lead is a substance which precipitates all tannins without exception. If you want to separate

(Testimony of J. J. Kessler.)

tannins as a whole from their chemical bodies, you use lead acetate. It is true that you get different colored precipitates, either you get pure white precipitates, you get yellow colored precipitates or you get brownish precipitates or brownish yellow or yellowish brown. Sometimes, where you get a white precipitate to begin with, it will turn yellow on exposure to the air. I have here a solution of pure tannic acid which has been treated with lead acetate and which came down as white precipitate. We will call that exhibit 238. It has since turned [1931] yellow on exposure to the light. The tannin in kola nuts or I started—I started with kola infusion—bottle marked Defendants' Exhibit No. 239 is the bottle that I have just referred to and the color of the substance I have just described. Exhibit 230 is an infusion of kola nuts. It has not been treated with ethyl acetate. When the kola nuts are so treated, the precipitate is very much less in extent. You can see a thin layer of it lying between the water—water layer on the bottom and the ethyl acetate layer on the top. It is slight but yellowish brown. The ethyl acetate method of extraction is a very imperfect method. These tannins are soluble in water and so is the ethyl acetate soluble in water to some slight extent. The tannins are also soluble in ethyl acetate so that you can say that it is only there to a very infinitesimal amount to begin with, but that it is almost impossible of research to find them at all by this method. In my method I used very large quantities of ethyl acetate and relatively small quantities

(Testimony of J. J. Kessler.)

of syrup, so that I had lots of room you may say for the tannins to go into, and that is the reason I think I got these definite tests. A bottle marked Defendants' Exhibit 240 is an infusion of kola nuts which has been extracted with ethyl acetate and afterwards with a solution of lead acetate. A third test is by the use of cinchonine sulphate, which is an alkaloid substance allied to quinine and some tannins, giving an insoluble precipitate or tannate of the alkaloids. A good many alkaloids are present in plants in combination with tannic acid. Now, in the case of this test, we did not have different colors to deal with. We have sometimes an absence of a precipitate, that is, you either get a white precipitate with cinchonine sulphate or else you don't get any. No. 241 is a test made with an infusion of kola nuts which has been extracted with ethyl acetate and finally treated with a solution of cinchonine sulphate. Very little, if any, precipitate. It is somewhat turbid when I shake it up. [1932] It is due to the amyl acetate in the water, which does not mix and they all separate very shortly. The fourth test is the treatment of the tannin substance with a gelatine solution. A great many tannins render gelatine insoluble, and this fact is made use of in the tanning industry. When a hide is treated with tannin it is for the purpose of rendering these gelatine-like substances insoluble, making the hide tough and more impervious to water. It is a general method applied for tannins. In this way you either get an insoluble substance or else you don't. This gives a negative re-



(Testimony of J. J. Kessler.)

sult with some tannins and so it is not characteristic with all tannins like the lead acetate, which always gives a precipitate. Now, here we have four tests for tannins and we see that while any one of these tests may not serve to individualize the tannin, yet when you use all four of them, it serves to distinguish without doubt that there is some particular tannin present. Here is a bottle of merchandise No. 5 which we will call exhibit No. 242. It has been treated with test No. 1 and gives a brown color. Test No. 1 is called the ferrochloride test. Here is merchandise No. 5 (No. 243) which has been treated with lead acetate. That is test No. 2. We tried to use the same numbers that Dr. Fuller used. I think they are correct. That gives a yellowish precipitate. The cinchonine sulphate test on merchandise No. 5 (Exhibit 244) gives no precipitate and the gelatine test with merchandise No. 5 gives a white precipitate. (Exhibit 245.) If I had used, I might state, different quantities of merchandise No. 5 or the ethyl acetate that I did use in making those particular tests, I would get darker colors—I will get some precipitate—so that the intensity of the color or the amount of the precipitate is hardly any criterion in this case. It simply means I have got less of that stuff in there. Ethyl acetate extracts tannin imperfectly to begin with. That is, I made, for instance—I made an ethyl acetate extract of pure tannin—tannic acid— [1933] and only perhaps one-third of the tannic acid would be in the solution of the ethyl acetate on one extraction. So that I would

(Testimony of J. J. Kessler.)

have to use relatively large amounts of ethyl acetate and a good many extractions to get enough substance out of these things to make a test. That is particularly true of syrups. Of course, in the case of an infusion you are dealing with relatively tremendous amounts of material—materials that are a thousand times or more in amounts than the tannin for instance in Coca-Cola syrup. I followed the direction given. I also followed Dr. Casperi. Dr. Casperi differs from Dr. Fuller in that he evaporates his ethyl acetate down to dryness and takes it up with water. It is a little more thorough but still I have found that it is more tedious. Dr. Casperi's method overcomes any objection that might be raised that ethyl acetate takes something else up besides tannin, but I found I got about the same results after taking it down to dryness, so I used the ethyl acetate and Dr. Fuller uses that. Here is an infusion of coca leaves. This is Exhibit 246, which has been tested with ferric chloride and it gives the same brown color which merchandise No. 5 gives. Of course, there are coca leaves used in making—I made the merchandise No. 5 there myself. This merchandise No. 5 that I am showing I made myself from coca leaves. And here is the lead acetate test of coca leaves. This is Exhibit 247. That is yellow and more prominent. Here is test No. 3 of coca leaves, which has practically none. This is Exhibit No. 248. And here is test—the gelatine test of coca leaves, which shows a precipitate. Exhibit No. 249. That is test No. 4. To that extent therefore these

(Testimony of J. J. Kessler.)

two tests coincide. Now, the question arises, does that prove that there are coca leaves present in merchandise No. 5? Does it prove that when you make a simple test like this—does it prove that there are coca traces in that thing that you are testing? Well, I have taken an infusion of mullein leaves, (Exhibit 250) which is an entirely different plant [1934] substance than coca and I get the brown color with the ferrochloride. I get a yellowish precipitate with the lead acetate. (Exhibit 251.) I get no precipitate with cinchonine sulphate. (Exhibit 252.) And I get the precipitate with gelatine. (Exhibit 253.) I have done the same thing with senna leaves. Senna leaves contain a yellow pigmentary substance which colors these solutions, but the nature of the tests, the results of the tests are practically the same. Now, I wish to state to the Court that I picked these two substances out at random, predicting that they would show these tests in my own mind, and my reasoning was this; I found that coffee gives instead of a yellow precipitate with lead acetate it gives a brownish precipitate. That is (Exhibit 254.) And the tea gives a brown precipitate in which there is practically no yellow. That tea is exhibit 255. Kola nuts give a precipitate which is quite brown. It is not that distinctive yellow, and up to that time coca leaves had been the only test which gave me the yellow color with lead acetate, and it occurred to me that if I would test a yellow colored leaf I would get a yellow test of it; I would choose a brown colored leaf—I had gotten a brown colored test in



(Testimony of J. J. Kessler.)

two cases in which I had used brownish substances because the tea, there, hasn't that yellowish tinge. It has more of a brownish tinge; so I chose these two substances at random and I got this, a common test that I got with coca leaves. The kola nuts give a little different precipitate. That is, we don't get that yellow you get with the lead acetate. It is more of the brown. Defendants' Exhibit No. 256 is an infusion of senna leaves with ethyl acetate and ferric chloride. Defendants' Exhibit No. 257 is an infusion of senna leaves extracted with ethyl acetate and treated with lead acetate. Defendants' Exhibit 258 is an infusion of senna leaves extracted with ethyl acetate and treated with cinchonine sulphate. Defendants' Exhibit 256 is an infusion of senna leaves extracted with ethyl acetate and treated with gelatine. [1935] Now, I also tested a sample of Koke syrup and I got practically the same tests that I got with Coca-Cola syrup. That is, I got a yellowish brown with ferrochloride and I got a very light yellow with lead acetate. That looks more white than it does yellow, the test which I got with Coca-Cola. You have to draw on your imagination in both cases to see the yellow in them. I think if I had had larger quantities of material in there that I would get a yellow color in both cases. I did get it from the coca leaves and I had much larger quantities to work with and with the Koke syrup with gelatine I got the precipitate.

The COURT.—Why not say these four bottles are marked blank blank?

(Testimony of J. J. Kessler.)

Mr. LITTLETON.—The only reason—I wanted to be certain that the record, there, would identify and so took them one at a time. Defendant's Exhibit 260 is Koke syrup extracted with ethyl acetate and treated with a solution of ferrochloride. Defendant's Exhibit 261 is Coca-Cola syrup extracted with ethyl acetate and then treated with a solution of lead acetate. Defendant's Exhibit 262 is Koke syrup extracted with ethyl acetate and treated with cinchonine sulphate. Defendant's Exhibit 263 is Koke syrup extracted with ethyl acetate and treated with a gelatine solution. Defendant's Exhibit No. 264 is Coca-Cola syrup extracted with ethyl acetate and treated with ferrochloride. Defendant's Exhibit 265 is Coca-Cola syrup extracted with ethyl acetate and treated with lead acetate. Defendant's Exhibit 266 is Coca-Cola syrup extracted with ethyl acetate and treated with cinchonine sulphate. Defendant's Exhibit 267 is Coca-Cola syrup extracted with ethyl acetate and treated with gelantine solution. Now, the conclusion which I draw from these tests is that while you get in coca leaves in a series of four tests of these four reagents that these tests are not peculiar to coca leaves and do not serve to establish the fact that coca is present in any substance which you might examine when tests were done. [1936] They serve to establish the fact that the tannin from coca leaves has any different properties or any individuality from numerous other substances. Every plant substance in the world which has green coloring matter in it contains tannin.

(Testimony of J. J. Kessler.)

These tests are general and are not particular. I wish also to say that I have not tested any leaves which I haven't brought along with me. That is, I got the coca tests in the two samples that I made. That is, in the mullein and in the senna, and I have no doubt I would get the same tests as this with other leaves if I was to test them. Defendant's Exhibit 268 is an infusion of kola nuts extracted with ethyl acetate and treated with ferrochloride.

Mr. LITTLETON.—I now tender and offer in evidence defendants' Exhibits Nos. 232 to 268 inclusive, offered in evidence on behalf of the defendants in the above styled case. If a syrup of this character is fermented, I don't know that it indicates anything except that it is fermented. It would depend on the percentage of sugar. If I found a sample which had a gravity of 1.23, which corresponds to about 50% of sugar, I would infer that the sugar had been destroyed by the fermentation rather than that the fermentation had resulted from low sugar percentage, because the difference between two syrups of 1.26 and 1.23 amounts to nothing as far as tendency to ferment is concerned. This 3% of cocaine in the coca leaf after it was extracted according to the process detailed by Dr. Casperi in merchandise No. 5, if the leaf is treated with a 20% alcohol to complete the process of making merchandise No. 5, would be extracted by the alcohol. That would enter into merchandise No. 5. From my analysis of merchandise No. 5 or Coca-Cola syrup, the presence of whatever there is in Coca-Cola syrup



(Testimony of J. J. Kessler.)

in the quantity that it is from the coca leaf would have no appreciable effect one way or the other upon the taste, flavor or aroma of the beverage. In my [1937] opinion, it would have absolutely none. The same is true of the kola nut. The tannin in merchandise No. 5 compared with the caffeine in merchandise No. 5—well, you could distinguish the tannin more than the caffeine because there is a lot more of it, that is, comparing it with the caffeine that is in merchandise No. 5. The tannins that are in merchandise No. 5 could come and undoubtedly do come from the kola, the coca and the sawdust. I have gotten reactions for tannin in white California wine. There is very many more times of caffeine in the Coca-Cola syrup than there is of tannin. Now, caffeine and tannin both taste something alike—both taste something like quinine, but you can't taste—you can't taste the caffeine in Cola-Cola syrup and you can't taste the tannin. I guess that is about all the tests that I made at this time.

Q. Doctor, what conclusion did you draw as the result of your analysis of Coca-Cola syrup and the quantity of whatever extractive there may be there from the coca leaf and the kola nut—what conclusion from what do you draw as to the value of the presence of this merchandise No. 5 in Coca-Cola syrup, if any?

A. I can't see that it has any value whatsoever. In my opinion, it has no value whatever either from a flavoring or condiment standpoint, nor does it serve the purpose of adding anything to any extent

(Testimony of J. J. Kessler.)

whatever which could have any purpose or effect. I don't say purpose but which could have any effect. Simple syrup is syrup made of water and sugar. If Coca-Cola syrup had added to it simple syrup, the taste of the syrup would be changed. It would bring out the element of the sweetness in the syrup. Caramel coloring is a coloring matter that is made from sugar by heating the sugar to a high temperature until it begins to color. It is not sugar any more, and no one knows exactly what it is, but it is a brown coloring substance made from sugar. It has a [1938] sort of burnt taste. The proportion of caramel coloring in Coca-Cola syrup as compared with merchandise—solids of merchandise No. 5 must be very much more. I can't give you any quantity figures, but the coloring of merchandise No. 5 is entirely insignificant compared with the coloring of the caramel. Defendants' Exhibit 268 is an infusion of sawdust. It is made from the sawdust which I used in preparing merchandise No. 5. The infusion has afterwards been treated with lead acetate. It is a yellowish white color. It has changed slightly in the last week. The tendency of all these whitish precipitates of tannin is to color slightly on standing. A bottle marked Defendants' Exhibit 270 is an infusion of tannic acid which has been treated with iron chloride. I would call that a dirty, dark green color.

Mr. LITTLETON.—I wish also to offer in evidence Exhibits 269 and 270.

(Testimony of J. J. Kessler.)

Cross-examination.

Different shades of color can be produced by different amounts of caramel used. You can produce almost any shade. Caramel is used for the purpose of coloring very generally. I do not recall that it is used for any other purpose. These tannin tests—the reaction is delicate in the sense that you will get something with a very minute quantity, but yet you have—for that very reason, if you have any considerable quantity of tannin, you will get enormous precipitates. The yellow that came from test No. 2—you could see it was there. It was not as strong as in the case of the infusion, of course. It is not heavy in the sense as it is in the case of infusions. They were about the same. There is slight immaterial differences. In the case of the infusions they are very heavy. The precipitates are very heavy. Teas are very heavy. Referring to Exhibits 261 and 265, this is a case of tea infusion. I would say it is very pronounced. I don't know that the infusion of coca leaves is in evidence. [1939] The original infusion is very heavy. After I made the ethyl acetate extraction, it was very much lighter because the ethyl acetate takes out very little of the original tannin. The coca leaf is similar to the tea leaf in size and color in a general way. I have never seen tea leaves that are used in making caffeine. Tea leaves that are exhausted for making caffeine are not necessarily exhausted in the sense that they have had things taken from them. They are just sweepings and not material that has been boiled at one time or been ex-



(Testimony of J. J. Kessler.)

hausted in the sense of extracting anything from them. I do not know the method used in extracting caffeine from tea leaves, in particular. Where I refer to boiling I mean that they had been leaves which had been previously boiled. When you take the caffeine out of the tea leaves by the boiling process, your remainder is an exhausted tea leaf. There is odor from the exhausted tea leaf. I have not understood you—when you say the word exhausted, I thought you meant the raw material out of which the caffeine is made. I have not seen them. I can imagine there would be some odor left. I got this sample of defendant's product in St. Louis from Mr. Van Dusen. He is a manufacturing pharmacist, I don't know whether he is connected with the defendant companies. I don't know whether he makes the syrup. I believe I would say that sawdust is inert, in the ordinary sense of the term. We might state certain things about sawdust—when we say they are not in them—inert. It becomes a matter of definition. In the sense of containing any active drug principle, or of containing flavoring principle, they are inert. Sawdust from the cedar trees has an odor and flavor. It depends on the kind of sawdust. Coca leaves contain certain oils. I didn't find any oils in merchandise No. 5. I tested it out for oils quantitative. When you test anything quantitatively that also implies that you have tested it qualitatively, within the limits of the measurements [1940] which you are making, everything you can get out quantitative. I have held it as an axiom for

(Testimony of J. J. Kessler.)

many years that what you can see you can weigh, and what you can weigh you can see, especially, of course, in making a quantitative determination of anything, that does not imply that there may not be some slight undisturbed residuum left, but that is all you can do about it. If I do not get any quantitative, the qualitative amount would be so insignificant that—we are simply assuming that there might be there, we don't know. I have proven that they are not there within the limits of the experiment. You could hardly get a measure of an odor,—you could get a sensation of it. It is possible there might have been that sensation mixed in this whole in among the oils. All the oils in the coca leaf are not volatile oils. Steam would not have driven off those that were not volatile. Wax is not volatile by steam in general. I do not consider that the steaming process makes much change one way or the other. Don't have any effect on it. The cellulose in this process in making merchandise No. 5 is all left behind. That is the fiber of the leaf. That is not removed by toluene. I am quite certain of that. The resins are not volatile. They have given all with the toluene. The toluene takes off all the resin. I used the regular test for separating resins from organic mixture. I took my toluene solution and evaporated it to dryness and measured the quantities used and in that way determined that the toluene extracted from the coca leaves six or eight times as much material as the cocaine present. This residue, a dark, sticky, waxy substance was then taken up with water and it was found

(Testimony of J. J. Kessler.)

to be almost entirely insoluble in water. Now, that is my view—in itself is not enough to indicate the waxy and resinous property of the substance. It could not have been tannin, for instance, for that is soluble in water. In other words, it could not have been any of the soluble things [1941] but that test alone indicates the general character and group of all of those things, the fats and the waxes and the resins under the general name is resinoids. It is immaterial, for instance, how much of it is really fat, how much of it is really resin. It comes down to a definition finally of where we are going to draw the line, what is a fat and what is a resin, but the test showed very clearly that there were eight times as much material taken out of the coca leaves as the cocaine and that these materials were classed as resinoids. That is not my own definition. It is a general term.

Then, after making the merchandise No. 5 from the spent leaves, to make my alcohol extract, I repeat the same test and found absolutely nothing of this character. Now, that proves within the limits of the test and always assuming that there may be left behind some slight significant trace which I did not measure, that they have been entirely removed by the first process. If I have left something behind it is so slight that I can't talk about it.

What experience have I had prior to this—with merchandise No. 5 with coca leaves and kola-nuts? I have assayed for cocaine and for caffeine. I have made fluid extracts. I have used them in making up syrups. Often it is I am asked to get up a syrup



(Testimony of J. J. Kessler.)

formula. I was asked as far back as six years to try to get up a Coca-Cola formula for a party, and I did work before in getting up a formula. This fluid extract of coca leaves you are talking about is used as a medicine and the fluid extract of kola-nuts the same way.

This scientific experience in determining what is in these coca-leaves and kola-nuts is the first experience of that kind I have had. I was simply repeating the inquiry. The inquiry came, "How much will you charge us to get us up a syrup that will be like Coca-Cola?" And I simply undertook to do the work.

I understood that it was a Coca-Cola syrup. I used the Pic-nometer method in arriving at the specific gravity of the [1942] of the syrup of Coca-Cola. I have had experience with vanilla ice-cream, the flavor in vanilla ice-cream is vanilla. For a quart of ice cream you would have to use more than a couple of drops of vanilla, it would be on the order of a teaspoon full. If we use the half of a teaspoon—it would be in the ratio of half a teaspoon to a quart, it would be very small. A gallon is 128 ounces, a quart is 32 ounces. It would be about 2%. It would be two parts in it, not on the order of one part in a million, it would be more on the order of one or two parts in a hundred—not on the order of one part in a million.

That is volume now by weight, I can say the same thing—the gravity is the same. While we are talking so generally, I can say it would be about the same ratio. Of course, the milk has a lot of water. Of

(Testimony of J. J. Kessler.)

course, the vanilla extract has a lot of alcohol in it, one part in a hundred I would say, and that is very nearly right, too.

The solids in the vanilla bean compare with the solids in the vanilla extract, that is giving opinions—the solids in the vanilla bean are necessarily very much greater than the solids in the vanilla extract. To make an acceptable standard vanilla extract, I can't recall the figure, but I can give it to you from the Pharmacopoeia if you wish it. Pharmacopoeia vanilla is somewhat stronger than the commercial extract. In making vanilla extract from the vanilla bean, of course, you only take out of the bean something of the solids. You don't take the fiber and lots of other things are left behind. In making up vanilla extract, I should take the flavoring principles. The fluid extract has been taken out of the last edition of the Pharmacopoeia, so I can't give you—it is still solid as a pharmacopoeia preparation. Now, I have made vanilla extracts and I am able to tell you that question. Oh, it would be on the order of five to one, that is, five times as much alcohol as there is bean used. That is, if you use five pounds of bean you would use perhaps twenty-five pounds of alcohol.

[1943]

I recognize the National formula as a standard work, I am simply now trying to recall something that I have done myself and something which is given as a standard formula somewhere. I think it was in the Pharmacopoeia but I see it has been removed in this last edition.

(Testimony of J. J. Kessler.)

The merchandise No. 5 that I have testified here to, Doctor, on yesterday and to-day, is merchandise No. 5 and I made up myself. I made it from the evidence of Dr. Caspari in this record. I have never tested the merchandise No. 5 as made up for the Coca-Cola Company, I made up two packages of merchandise No. 5 and that is all I have ever made. I have testified to concerning merchandise No. 5 does not come from the unit I have derived and the test I have made on the merchandise No. 5 that I made up myself. It all started from Dr. Caspari's testimony. In this merchandise No. 5 that you have made up, after the use of toluene, there remained .3 of 1% cocaine. I used the same official method to get that out, that I used in determining the cocaine in the original leaf. I did not use toluene. I do not quite follow that. I don't remember, I carried the extraction on for several days and made a very thorough extraction and, of course, toluene takes out the cocaine, and if I had continued the extraction for a much longer period, I would probably have got out further quantities of the cocaine.

That is the process used in this—what is called, I believe, the Schaeffer process. Toluene is used to extract cocaine, it is a good extractive. I have not tested out different batches of tea leaves of the same species to find how much cocaine is in them or whether they vary among themselves. The Pharmacopoeia standard is one-half of a per cent. Practically every plant substance varies in its composition. As I say, the Pharmacopoeia accepts a standard of



(Testimony of J. J. Kessler.)

one-half per cent cocaine on coca leaves. They must have that in them to be official. In making extract of coca, make your extract, make an assay of it, and finding that is something higher than that, then dilute. It does vary, I suppose coca leaves even of the same species vary and if different species, I presume it would vary, also. [1944]

Mr. HIRSCH.—That is all.

Redirect Examination by Mr. LITTLETON.

The strength of flavoring matter in the coca leaf is very much stronger than the vanilla bean. It has a very pronounced astringent, aromatic flavor. If you added ten times the quantity of vanilla flavor that you would ordinarily use to a gallon of ice cream, it would be unpalatable. It would be so strong. You certainly can detect the presence of vanilla flavoring in vanilla ice cream.

My recollection is that the quantity of alcohol used in making vanilla extract is very much less than used in making merchandise No. 5. Vanilla extract has considerable body to it. Of course, some extracts have added sugar, which will help the body, but my recollection is that the quantity of alcohol used in making vanilla is very much less. Long-continued toluene extraction would have the same effect on any possible residue or waxes or resinous substance, the fat or anything of that kind that might possibly be left in the leaf, any bare trace that might be left there. All extractions tend towards completeness as a result. You do not in a practical way try to get out the last minute trace of a thing that you are ex-

(Testimony of J. J. Kessler.)

tracting, because the cost of doing that becomes much greater than the value of the substance that is left behind; so in any commercial process of that kind you carry it along to a certain point where it becomes practical to stop. A manufacturer has no object in taking out every last trace of a thing. His object is to take out that much which he can do at a profit, so in general these chemical processes are not carried to absolute completion.

Caramel coloring has a flavor, it would impart a flavor, however slight, to a syrup or mixture in which it was used.

Mr. LITTLETON.—That is all.

Recross-examination by Mr. HIRSCH.

I have tasted caramel in substances where it is used. It gives a sort of a burnt taste. [1945] It is used primarily for the purpose of coloring, of course.

(Defendants' Exhibit No. 271 offered and received in evidence. No objection.)

(Defendants' Exhibit No. 273 offered and received in evidence. No objection.)

(Exemplified copy of the transcript in the case of Coca-Cola Company vs. Henry A. Rucker offered by Mr. Littleton but on objection by counsel for plaintiff objection was sustained by the Court, to which ruling Mr. Littleton took an exception.)

(Defendants' Exhibit No. 274 offered and received in evidence over the objection of counsel for plaintiff, to which ruling of the Court, counsel for plaintiff took an exception.)

**Tetimony of Wm. M. Simonson, for Defendants.**

WM. M. SIMONSON, being called as a witness on behalf of the defendants, and first duly sworn, testified as follows:

Direct Examination by Mr. LITTLETON.

I am fifty-four. I reside in Cincinnati. I am a chemist, analytical and applied. I got my chemical education, beginning at the College of Pharmacy, Cincinnati. I worked for some time at laboratory of Messrs. Lloyd Brothers in Cincinnati. That was for a short period and afterwards I supplemented my knowledge in a variety of ways. I carried out a number of investigations in pharmacy and published the result thereof and afterwards took up the commercial economic analysis. I have been a practicing analytical chemist. About 21 years past, I have been actively engaged in work of a rather diverse character, largely unorganic as applied to questions in the art and to no small extent in organic, including toxicology.

Toluene would extract from the coca leaf any fatty material, wax, chlorophyl, any essential or volatile oil. That is about all for the natural leaf. It would not affect alkaloids in their natural state of combination, at least not materially. Toluene would not extract the alkaloids in their natural state of combination. It would extract the free alkaloids—alkaloids set free by a base [1946] such as carbonate of soda for example. I have read the testimony of Dr. Caspari in this case as to the method whereby merchan-



(Testimony of Wm. M. Simonson.)

dise No. 5 is made for Coca-Cola syrup. By the process which he uses, toluene would take out of the coca leaf the organic bases so far as they are in a free state, any waxy material, probably take out all of it, take out any fixed volatile oil or—it would likewise dissolve no small part of the resinous material present and likewise of the chlorophyl.

The flavoring properties are due, if I understand, to volatile material and practically they would be dissolved entirely by the toluene, assuming, of course, the extraction is carried to some liberal extent. I carried out the process of Dr. Caspari as I understood it from the testimony given and likewise tested the residual coca leaf for the original or undissolved alkaloids. I carried out the extraction in stages and recovered the toluene by distillation at intervals, about five times the weight of the drug mixed in toluene employed. The extraction I carried out in two general stages. In the first case I used the coca leaf moistened with its own weight of water, which carried bicarbonate of soda, such being the method in the testimony equalling 2% of the weight of the coca leaf in the spent stage. That was raised to 4% of the coca leaf preceding the second state of the toluene extraction. Altogether, the extractions amounted to something like 70 or more times the weight of the coca leaf employed. I tested the coca leaf residue after the toluene extraction and this denaturing process, tested that and found .03 of 1% of total base, following the assay method given in the Pharmacopoeia of the United States.

(Testimony of Wm. M. Simonson.)

The leaf was steamed say a period of about five hours, after the toluene extraction. It was probably a little bit more than five hours. I used steam drawn from the plant of a laundry at about 90 pounds pressure. It must be understood that the steam was not applied to the leaf at that pressure, as that was out of the question, but as I understood the testimony given by Dr. Casperi, was allowed to escape [1947] into the air, so that the temperature would be or correspond to the team at that pressure or less pressure even. After the steaming operation, the coca leaf was—the residue was tried together with whatever might have condensed from the steam and that residue was then tested, applying again the method of the Pharmacopoeia, and the return was .024 of 1% of organic bases. That residue in the free state would be soluble in alcohol. It would be taken out even by water in that preparation. Cocaine is soluble in water to some extent.

I have read the testimony of Charles Howard Candler as to the method by which the Coca Cola Company formerly made merchandise No. 5. I can't say of the identity of Mr. Candler, but the testimony was that given by Mr. Candler, one of the officers of the Coca-Cola Company, if I recall the statement. Now, I followed the plan which he outlined there, that is, I followed the preparations given and necessarily on a smaller scale. I made another batch of merchandise No. 5 according to the method detailed in the testimony of Dr. Casperi in this case. I compared them together. The method as outlined by Mr. Candler

(Testimony of Wm. M. Simonson.)

gave a tincture or essence that he called merchandise No. 5, which retained and contained the aroma of the coca leaf so that it would be readily distinguished even by smell from the one produced by the latter method. The latter had a very slight odor, practically had none, due from the fact that the diluted alcohol which I used would have some slight odor of its own.

Q. As between these two samples of merchandise No. 5, Doctor, state whether or not there was any difference of taste and flavor.

A. The difference in taste was very considerable. Of course, the taste was influenced to some extent I presume by the flavor likewise, but the difference in taste was quite substantial. I prepared a syrup for making any of these by taking an ordinary simple syrup, ordinary gravity, and add to that the burnt sugar for coloring, but no flavoring matter of any kind whatsoever. It contained [1948] some phosphoric acid, however, which gave it a pleasurable and agreeable taste. I think I had nothing else in that excepting some caffeine likewise. The syrup in which I put the two samples of this merchandise No. 5 was the same batch of syrup. In the merchandise No. 5 made by the Candler process in it and the merchandise No. 5 made by the Casperi process, there was a notable difference in the taste of the two; in the one—the Candler formula—the aroma of the coca leaf was retained, likewise it was shown by the taste; in the case of the other—the taste was very slight indeed. The taste of the syrup mixed—the mixture of the simple syrup as prepared with these two different



(Testimony of Wm. M. Simonson.)

tinctures or essences; in the case of the one made from the new coca leaf the aroma was retained; in the case of the one made with the treated leaf, the taste was very slight. It was not at all comfortable with the one contained in the new coca leaf. That astringent, slightly astringent taste, was due, I considered it due to the tannin compound extractible from the kola nut.

The caramel of the trade is a product derived from sugar by melting it, afterwards continuing the heating. Caramel has a characteristic flavor, it is used as a flavoring agent, I understand, in making confectionery.

Tannin, at least to my senses, has almost no flavor whatsoever. Commercial tannin has a very slight odor, commercial tannic acid—I refer to almost any one, however—the flavoring of caramel is very considerable, the flavoring of caramel is hardly to be compared with that of tannic acid. If you took a sample of syrup—of genuine Coca-Cola syrup, ten cubic centimeters of that syrup in a test tube and dilute that with forty cubic centimeters of water and observe the shade of that coloring, and then you had another sample of syrup, the origin of which you did not know, and you took and performed some experiment with that ten cubic centimeters of that syrup and diluted with forty centimeters of water and found a different shade of color, the difference in [1949] color would not indicate difference of origin, necessarily, the second sample, that of unknown origin, might or might not have been made to—or

(Testimony of Wm. M. Simonson.)

approach the color of the first; the same quantity of caramel of this character tested does not always give exactly the same character of color in my experience. I found differences in coloring value of caramel as a market article bought ready-made for instance. It is possible to make two batches of caramel coloring identically the same shade: I think they can be if the same conditions are used in the manufacture, which is chiefly the degree of heat applied and the duration of the same. I have made experiments on Coca-Cola syrup as to its specific gravity, caffeine contents, phosphoric contents, etc. Q. Several samples (I will identify the sample after he has testified). I will have to refer to a memorandum I have regarding the same. I have five samples altogether. Three contained in one gallon jugs, and two contained each in five gallon casks. The gravity of the first one tested was 1.2630, the second one 1.2677, the third 1.2653, and the fourth 1.2637, and the fifth 1.2668. These were made at sixty degrees Fahrenheit compared with water at the same temperature. Following in the same order, the percentage of caffeine was .170, .157, .158, .152, .167. I made the final determination and in fact these figures are the result of such by determining the caffeine by the volumetric formula of Gomberg—the phosphoric acid results, as  $P_2O_5$ . Following in the same order the determination of this phosphoric acid resulted in finding .220 per cent, .215 per cent, .221 per cent, .219 per cent, and .212 per cent. Simple syrup added to Coca-Cola

(Testimony of Wm. M. Simonson.)

syrup or syrup of that character would affect the taste of the syrup in a degree. At least it would reduce the acidity for instance, and the flavor likewise. If you had a genuine sample of known Coca-Cola syrup and tested that beside a sample of Coca-Cola syrup which had been diluted or to which had been added simple syrup, there would be no difference in taste between those two, except in degree. There would according to dilution be a difference. There would be a sufficient difference in taste to enable a man to say [1950] truthfully that he found a difference in taste between the two; if the amount were considerable, that is, the dilution were considerable. For myself, I couldn't tell a small dilution, but I could a large dilution. I examined all of these samples of Coca-Cola to determine whether there was any residual organic base—I found the residual base in each of the samples examined. I mean by the residual base, the organic base, presumably not taken out in the manufacturing process. That is probably a mixture of the bases as originally contained in the leaf and probably is modified by the manufacturing process applied to that leaf of the simple elements or the things that go to make up that mixture. Cocaine is presumably the chief one, together with whatever may have been associated with it in the leaf. The principal alkaloids are cocaine, cinnamyl-cocaine, and cocamine. I first worked on a gallon for getting out the first test. I used a gallon made up from two of the one gallon packages and afterwards used the



(Testimony of Wm. M. Simonson.)

compound recovered by us—ten gallons from the two five gallon packages. It is a mixed organic base. In the one gallon, I found about one-fortieth of a grain, and in the ten gallon—the two five gallon packages—in round figures one-fifth of a grain. The tests I made to determine what that residue was. I applied one—one chemical test which is known as the Chronate test; a small amount of the material in a solution has added to it one fraction of a drop, in this case of a five per cent solution of chromic acid. In the case of pure cocaine, the precipitate is produced which is redissolved at ordinary temperature. In this case there was a slight, permanent precipitate. Now, in adding dilute acid, then the chromic acid precipitate is increased and that was the case in this instance. It was an increase in the precipitation. It was an increase of precipitation at that point. It is one of the tests that are applied to cocaine. I applied two tests, which are entirely physiological, the test depending on benumbing action, one test depends upon the benumbing effect of the coca bases and one upon this—upon its ability to dilate the pupil of the eye. [1951]

It was able to get the benumbing action, which was of short duration in the case of applying it to myself, and the other test was applied to the eye of a small cat, probably about six weeks old. It had a dilating effect upon the eye—the pupil of the eye to which it was applied. I am not aware that they would be classified (those two tests) as standard tests in the ordinary sense of the word; that is. they would ordin-

(Testimony of Wm. M. Simonson.)

arily apply in testing a substance to identify it as cocaine. I think it is particularly applicable in this case, where we had a known complex mixture to deal with.

The coca leaf is grown chiefly in Bolivia and Peru, South America. It is the coca plant. It has been grown there for a very long time. My information is entirely by reading. The fact is that it is commonly employed by chewing. It is mixed with some base like lime. It is as commonly used down there as tobacco and coffee and tea are used among ourselves.

A considerable number of preparations of coca leaf came into use about that time, 1886, chiefly on account of the agitation due to the introduction of the prepared alkaloid into medical and surgical practice. The cocaine was much talked of in pharmaceutical and medical practice about 1884 and 1886, and these various wines and the like were put on the market about that period. From my experience, which was obtained from my connection with the drug business, they were sold largely outside of physicians' orders. They were less or more known popularly, and I know for myself I had sold them often without any orders from any physician whatsoever, much like an ordinary merchandise package would be sold at any pharmacy—might be a mineral water oftener than anything else.

From hearing the name "Coca-Cola," I would expect that the product would carry both the ingredi-

(Testimony of Wm. M. Simonson.)

ents named: namely, coca and kola. If all of the alkaloids and all of the essential oils were extracted from the coca leaf, I would not consider it longer as coca. If all the morphia were extracted from opium, what was left would not be opium. If all the strychnine was extracted from nux vomica, what would be left would not be nux vomica. It would not [1952] come under the description of nux vomica as ordinarily applied to pharmacopoea descriptions among others.

The samples of syrup that I got were bought through retail pharmacists in Cincinnati. They were ordered to be in original packages as put out by the jobbing trade at that time. They had not been opened as far as I was aware. I should say that none of them were sealed, however. They were delivered with the label as shown, but there was no seal over the package; that is, over the cork of the package, which cork was cut off flush with the top of the glass.

“Defendants’ Exhibit 275” is one of the bottles I got this syrup in. “Defendants’ Exhibit No. 276” is another bottle. “Defendants’ Exhibit No. 277” was one of them, likewise. Besides the two five-gallon casks, I got the five-gallon cask marked “Defendants’ Exhibit No. 278.”

One package has the shipping address, Albert Vogler Drug Company, both of Cincinnati. The address is on the other side. *The address is on the other side.* The address here is the one to me. I bought it direct. The Albert Vogler Drug Company,



(Testimony of Wm. M. Simonson.)

as far as my information is gained, is one of the distributors for Cincinnati.

I now tender and offer in evidence Defendants' Exhibits—the bottles and kegs marked respectively, "Exhibits 275, 276, 277, 278, 279."

Cross-examination by Mr. HIRSCH.

The two five-gallon kegs were obtained from a neighboring pharmacy conducted by Mr. Groenland. I obtained them from him. I went direct to him and obtained them myself. I asked him for a five-gallon package of Coca-Cola syrup. I wished to get it in an unopened or original package; syrup as made by the Coca-Cola Company of Atlanta, who, I believe, is the plaintiff in this case. That applied not only to the two five-gallon kegs, but to the three one-gallon jars, to all of them equally. The Coca-Cola syrup I received is [1953] that which was ordinarily used for soda-fountain syrups, and the one that is widely advertised, and the one that is made and manufactured by the Coca-Cola Company? That is what I intended to get when I asked for Coca-Cola syrup. This preparation, before 1886, was more of a proprietary article. It was of a class that was largely advertised and so popularly used for whatever the producer might advertise it for. I am not aware what was used in the way of inducing sales of this—of these preparations. They were called for popularly. What they were used for, I have no knowledge. I never used them myself. They were not used as soft drinks, that I should know of. They

(Testimony of Wm. M. Simonson.)

were supposed to be of a medicinal class as far as I am aware. This coca leaf grows on the small plant, more of a shrub; it is a small tree that is in the nature of a shrub. There is such a thing as the coca tree, and there is such a thing as fluid extract of coca. That is one of the medicinal preparations. At the present time, as far as I know, the fluid extract is the chief representative of the leaf as far as liquid preparations are concerned. Many of these compounds that were offered years ago as far as I know now are not longer in demand. I expected to find in this coca-cola beverage a liquid preparation made from the leaf used in compounding the syrup. That is what I anticipated. This cocaine I took it out of the three one gallon jugs. I applied the test to the separated bases, which would be isolated in the ordinary way for obtaining alkaloids. Take 275, I took out a measured quantity; measured about a half gallon in that particular one, in fluid ounces about 128 in a gallon. I took 64 fluid ounces. That was made alkaline; in this case with ammonia. The ammonia would liberate any bases of this character contained in it. In other words, they would exist then in the free state. Ether, which was then applied as an extracting medium to extract the organic bases that may be present or might be taken out in that manner. I don't know that I could give you the number of organic bases there are in the coca leaves, [1954] ordinarily attributed to the leaf. I don't know that that point is definitely explored. The literature is

(Testimony of Wm. M. Simonson.)

very large. I in fact know of these alternative bases through the description. I have never had them in an isolated state. I have never taken the coca leaf itself and analyzed it for the organic bases. I have not attempted to separate the mixed bases recovered from the leaves at any time. The recovery was 1/40 of a grain to a gallon, altogether. I took a gallon altogether, and from a gallon, I got 1/40 of a grain of organic bases. That organic base had 1/40 of a grain that I got from a gallon of Coca-Cola syrup. The test we applied indicated that cocaine formed a part of it. In view of the test, I think that could not have been ecgonine. I have never tested any ecgonine at that time to find out whether it does not bring about the same result as cocaine. I don't know anything about ecgonine, in this case. I have never tested for ecgonine in any shape or form. It could not have been ecgonine, in view of the physiological test. The physiological test that cocaine responds to is stated to have no effect on ecgonine. I do not know whether it does or not of my own testing. I don't think I can cite you any tests. I am not positive there ever have been any tests carried on for ecgonine. There have been experiments carried on. The ecgonine is a product derived from the other bases. Ecgonine is the parent base, but in so far as I am aware, it is not contained in the leaf naturally. It is not a matter of fact that the cocaine is broken down into its parent base, ecgonine. I made pretty certain it is not broken down in the process carried



(Testimony of Wm. M. Simonson.)

out. The method is one that will recover the coca bases in their practically unchanged state? I do not know whether I recovered any ecgonine or not, as a separate or free base. Q. Did you give substantially any time and attention to the coca leaves prior to these experiments? Not more than would ordinarily be given in the course of examining the drug for the amount of total alkaloids found in it. There would be about 1/6400 of a grain of base as recovered in one ounce of syrup. I imagine that would not dilate [1955] the pupil of the eye. I am pretty sure it would not. I am pretty sure it could not be tasted. I undoubtedly could not tell 1/6400 of a grain by the marked taste. I consider any slight astringency would be due to the tannin. It was due to the tannins in the kola nut chiefly, as far as I am aware. I could not observe any astringent taste from the essentials of the merchandise No. 5. Astringency was not marked in that case. There were slight indications of the kola nut preparation. The analyses of kola nut always report tannin present. I have simply made a qualitative test not to separate all tannins as such. I have never separated tannins. I am not aware that a German has recently brought out an article saying that there are no tannins in the kola nut and the idea that there is kola tannin is absurd. I did not just accept the doctrine that there are tannins in the kola nut because I read that that is so. I made the test with the ferro-chloride solution, which gave the darkening or blackening due to com-

(Testimony of Wm. M. Simonson.)

bination of tannin with the iron. I considered that a sufficient test that there were tannins in the kola nut. I couldn't say that none came from the coca leaf but I believe the chief came from the kola.

The method I used in determining the caffeine contents of the five samples of Coca-Cola syrup is I diluted the syrup with about an equal volume of water, using from 25 to 35 drams for the experiment. The reduction of water is to reduce the viscosity so that it will separate more readily. I used chloroform in the extraction rather greater in volume than the dilution referred to. These extractions were washed in succession with a small amount of water, about 30 to 35 cubic centimeters in this, and the clear chloroform extractions mixed, from which the chloroform was then bottled and the residue weighed. The residue containing the caffeine, likewise contained other materials, as the resulting product did not dissolve completely in water, always leaving a slight residue. The chloroform residue was then extracted completely with water and this clear solution mixed with an excess of a measured solution of iodine in potassium iodide [1956] solution, followed by a small amount of hydrochloric acid. After about ten minutes, this solution was filtered perfectly clear and then the residual iodine was determined in a part of the total liquid was calculated. That then gave by subtraction of the quantity combined with the caffeine. From the amount of iodine obtained by this method the calculation was

(Testimony of Wm. M. Simonson.)

made as to the quantity of caffeine taking part in this reaction. I have had relatively small occasion to apply that test for determining the caffeine contents of syrups like Coca-Cola. I don't think I have ever before this time analyzed any, syrup like Coca-Cola. Before proceeding with these analyses, I made up a composition containing caffeine and the other elements that have been referred to and determined the caffeine contained therein as compared with the original amount put in and known. To find out whether that was pure caffeine I had there I considered the Gomberg test itself ample. The Gomberg test would have the same effect on the bromine as it has on caffeine. I couldn't tell whether it was throbromine or caffeine. I use the picnumeter to determine the gravity.

I testified that different samples of caramel could give different degrees of coloring. It depends on the character of the preparation of caramel exactly. The flavor would undoubtedly be the same in kind. It might be a difference in degree, however. I have made caramel coloring in a small way from sugar and know the produce will vary from the degree of heat applied. The flavor does not vary substantially excepting as to the quantity. It does not require any special training in order to be able to determine caffeine in a syrup of this kind, outside of that which one will ordinarily have due to carrying out quantitative analysis. A careful, conscientious analytical chemist who had been in the habit of analyzing—of



(Testimony of Wm. M. Simonson.)

making analysis of different preparations, if he is accustomed to making analyses in a quantitative way, would hardly depart from the ordinary instructions given for recovering caffeine completely. They are [1957] pretty well understood. If one follows those, he will come very close to the method. Before starting these analyses or before executing them, however, I had made a recovery of caffeine practically identical to these put into a composition. That was more to be certain that I would have all the details properly attended to.

I would expect the ordinary soluble materials such as would be taken up by dilute alcohol to be present in this liquid extraction from the coca leaf so prepared. I refer to the exhausted coca leaf. For instance, such a dilute liquid would hardly take up any waxy material for example. It would take up some chlorophyl in a very small amount. If there was any left of the aromatic oils, it would take up some of that likewise and likewise take up all the other soluble materials or practically all of them.

This liquid compound that I expected to find in the syrup, I would expect it to contain the proximate principles of the coca and likewise of the kola nut that would be soluble in a liquid of that character. The characterizing ingredient of the coca leaf would be the alkaloids. I expected to find from the leaves such as would be soluble in a liquid of this kind and character. Cocaine or its associated alkaloids would be soluble in a liquid of this character, that is Coca-

(Testimony of Wm. M. Simonson.)

Cola syrup. I really did not expect to find cocaine when I made the original test. I was rather expecting to find it absent in the test. I did not know what to find. I had this material put before me without any specific information as to what it might contain.

Redirect Examination by Mr. LITTLETON.

I didn't expect to find the cocaine in the syrup—Coca-Cola syrup that I analyzed, because I did not expect that commercial articles would carry any such material. The presumption is not in favor of finding it on account of the close application of the Food and Drugs Act. [1958]

Mr. HIRSCH.—I object to that, your Honor—telling why he does not think something.

Mr. SLOAN.—He is explaining his answer.

The COURT.—I sustain that objection. It is a matter of argument. Exception for defendants.

This was all the evidence introduced in this case.

Examined and accepted May 23, 1917, at Phoenix, Arizona.

J. E. MORRISON,  
Solicitor for Plaintiff.

I, Wm. H. SAWTELLE, United States District Judge for the District of Arizona, do hereby certify that the foregoing Statement of the Evidence herein, consisting of four volumes and containing 1,613 pages, is true, complete and properly prepared, and is approved this 26th day of May, 1917.

WM. H. SAWTELLE,  
Judge.

Filed May 26, 1917.    Mose Drachman, Clerk.    By  
R. E. L. Webb, Deputy.

CH. 48.    [1959]

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*In the United States District Court for the District  
of Arizona.*

IN EQUITY—E-21 (Phoenix).

THE COCA-COLA COMPANY,

Plaintiff,

vs.

KOKE COMPANY OF AMERICA, SOUTHERN  
KOKE COMPANY, LTD., KOKE COM-  
PANY OF TEXAS, KOKE COMPANY OF  
OKLAHOMA, KOKE COMPANY OF AR-  
KANSAS,

Defendants.

**Stipulation as to Original Exhibits.**

It is hereby stipulated and agreed by and between the parties to the above-entitled cause, by their respective counsel, that for the purpose of the appeal in the above-entitled cause to the Circuit Court of Appeals for the Ninth Circuit, all the exhibits introduced and filed in this cause shall be regarded, deemed and treated as models, diagrams and exhibits of material, within the meaning of Circuit Court of Appeals Rule 34, and each party shall place in the custody of the marshal of the Circuit Court of Appeals at San Francisco, at least ten days before the case is heard or submitted, such of the exhibits that were introduced in evidence by it as it may desire, and shall furnish to opposing counsel, on or before Au-



gust 1st, 1917, a memorandum or list of such exhibits, and each party shall, in addition, place in the custody of the [1960] said marshal, at San Francisco, at least ten days before the case is heard or submitted, such of the exhibits introduced in evidence by it as the opposite party may desire, and the opposite party shall furnish it, or its counsel, with a memorandum or list of such exhibits on or before August 15th, 1917; and that an order may be entered in accordance with this stipulation, which, together with said order, shall be included in the transcript of the record.

This the 10th day of May, 1917.

HAROLD HIRSCH,  
Solicitor for Plaintiff.

A. B. LITTLETON,  
Solicitor for Defendants.

[Endorsements]: Filed May 25, 1917 at — M. Mose Drachman, Clerk. By R. E. L. Webb, Deputy. Law Offices: Littleton, Littleton & Littleton, Chattanooga, Tenn. [1961]

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*In the United States District Court for the District  
of Arizona.*

MINUTE ENTRY APPEARING UNDER DATE  
OF MAY 26th, 1917.

NO. E-21 (PHOENIX).

THE COCA-COLA COMPANY,  
Plaintiff,

vs.

THE KOKE COMPANY OF AMERICA, et al.  
Defendants.

**Order as to Original Exhibits.**

On reading the stipulation of counsel filed herein, dated May 10th, 1917, it is ORDERED by the Court that all the exhibits introduced and filed in this cause shall be regarded, deemed and treated as models, diagrams and exhibits of material, within the meaning of Rule 34 of the Circuit Court of Appeals, and each party shall place in the custody of the marshal of the Circuit Court of Appeals at San Francisco, at least ten days before the case is heard or submitted, such of the exhibits that were introduced in evidence by it as it may desire, and shall furnish to opposing counsel, on or before August 1st, 1917, a memorandum or list of such exhibits, and each party shall, in addition, place in the custody of the said marshal at San Francisco, at least ten days before the case is heard or submitted, such of the exhibits introduced in evidence by it as the opposite party may desire, and the opposite party shall furnish it, or its counsel, with a memorandum or list of such exhibits on or before August 15th, 1917, all in accordance with the terms of the stipulation above referred to, which said stipulation was filed of record in the office of the clerk on May 25th, 1917.     [1962]

*In the United States District Court for the District  
of Arizona.*

NO. E-21 (PHOENIX).

THE COCA-COLA COMPANY,

Plaintiff,

vs.

THE KOKE COMPANY OF AMERICA et al.,  
Defendants.

**Certificate of Clerk of United States District Court  
to Transcript of Record.**

United States of America,  
District of Arizona,—ss.

I, Mose Drachman, clerk of the United States District Court for the District of Arizona, do hereby certify the 1967 typewritten pages, numbered from 1 to 1967, inclusive, to be a full, true, correct and complete copy of so much of the record, papers, and other proceedings in the above and foregoing entitled cause as are necessary to the hearing of said cause, and as is stipulated for by counsel of record herein, as the same remain of record on file in the office of the Clerk of said District Court, and that the same constitute the record on appeal from the judgment of said United States District Court for the District of Arizona, to the United States Circuit Court of Appeals for the Ninth Circuit.

I further certify the following to be full, true and correct statement of all expenses, costs, fees and charges incurred and paid in my office by or on behalf



of the defendants for the preparation and certification of the typewritten transcript of record issued to the United States Circuit Court of Appeals for the Ninth Circuit in the above-entitled cause, to wit:  
[1963]

Clerk's fee (Sec. 828 R. S. U. S. as Amended by Sec. 6, Act of March 2, 1905), for making typewritten transcript of rec- ord, 6445 folios at 20¢ per fol.....	\$1,289.00
Certificate of Clerk to typewritten tran- script of record, 4 folios, at 30¢ per folio .....	1.20
Seal to said Certificate.....	.40
	<hr/>
	\$1,290.60

I hereby certify that the above cost for preparing and certifying record, amounting to \$1,290.60, has been paid to me by R. E. Sloan, Esquire, one of counsel for the defendants herein.

I further certify that I hereto attach and herewith transmit the original Citation in this cause.

Witness my hand and the Seal of said District Court, affixed this 12th day of June, A. D. 1917, at Phoenix, Arizona.

[Seal]

MOSE DRACHMAN,  
Clerk,  
By Ethel A. Webb.  
Deputy Clerk.     [1964]

*In the United States District Court for the District  
of Arizona.*

THE COCA-COLA COMPANY,

Plaintiff,

vs.

THE KOKE COMPANY OF AMERICA, THE  
SOUTHERN KOKE COMPANY, LTD.,  
THE KOKE COMPANY OF TEXAS, THE  
KOKE COMPANY OF OKLAHOMA, and  
THE KOKE COMPANY OF ARKANSAS,  
Defendants.

**Citation on Appeal.**

United States of America,—ss.

To The Coca-Cola Company, Greeting:

You are hereby cited and admonished to be and appear at the Circuit Court of Appeals of the United States for the Ninth Circuit, to be held at the City of San Francisco, in the State of California, on the 27th day of November, 1916, pursuant to an order allowing an appeal filed and entered in the clerk's office of the District Court of the United States for the District of Arizona, from a decree signed, filed and entered on the 16th day of September, 1916, in that certain suit, being in equity No. E-21, wherein The Coca-Cola Company is plaintiff and The Koke Company of America, The Southern Koke Company, Ltd., The Koke Company of Texas, The Koke Company of Oklahoma, and The Koke Company of Arkansas, are defendants and appellants, to show cause, if any there be, why the decree rendered against the

said appellants, as in said order allowing appeal mentioned, should not be corrected and why justice [1965] should not be done to parties in that behalf.

WITNESS the Honorable W. H. SAWTELLE, United States district judge for the District of Arizona, this       day of October, 1916.

WM. H. SAWTELLE,  
United States District Judge for the District of Arizona.     [1966]

[Endorsed]: No. ——. In the United States District Court for the District of Arizona. The Coca-Cola Company, Plaintiff, vs. The Koke Company of America, The Southern Koke Company, Ltd., The Koke Company of Texas, The Koke Company of Oklahoma, and The Koke Company of Arkansas, Defendants. Citation on Appeal. Service Acknowledged Oct. 28, 1916. J. E. Morrison, Atty. for Plaintiff. Filed Oct. 25, 1916, at — M. Mose Drachman, Clerk. By R. E. L. Webb, Deputy.     [1967]

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[Endorsed]: No. 3012. United States Circuit Court of Appeals for the Ninth Circuit. The Koke Company of America, The Southern Koke Company, Limited, The Koke Company of Texas, The Koke Company of Oklahoma and The Koke Company of Arkansas, Appellants, vs. The Coca-Cola Company, a Corporation, Appellee. Transcript of Record.



Upon appeal from the United States District Court  
for the District of Arizona.

Filed June 15, 1917.

F. D. MONCKTON,  
Clerk of the United States Circuit Court of Appeals  
for the Ninth Circuit.

By Paul P. O'Brien,  
Deputy Clerk.

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*In the United States District Court for the District  
of Arizona.*

No. E.-21 (PHX.).

THE COCA-COLA COMPANY (a Corporation),  
Plaintiff,

vs.

THE KOKE COMPANY OF AMERICA, THE  
SOUTHERN KOKE COMPANY, LTD.,  
THE KOKE COMPANY OF TEXAS, THE  
KOKE COMPANY OF OKLAHOMA, and  
THE KOKE COMPANY OF ARKANSAS,  
Defendants.

**Order Under Rule 16 Enlarging Time to January 15,  
1917, to File Record and Docket Case.**

Good cause appearing therefor, IT IS HEREBY  
ORDERED that the time within which the defend-  
ants in the above-entitled cause are required to pre-  
pare and file with the Circuit Court of Appeals, a  
transcript on appeal be extended an additional sixty  
days from the 16th day of November, 1916.

WM. H. SAWTELLE,  
Judge.

[Endorsed]: No. 3012. United States Circuit Court of Appeals for the Ninth Circuit. Order Under Rule 16 Enlarging Time to January 15, 1917, to File Record Thereof and to Docket Case. Filed Nov. 20, 1916. F. D. Monckton, Clerk. Re-filed Jun. 15, 1917. F. D. Monckton, Clerk.

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*In the District Court of the United States for the  
District of Arizona.*

THE KOKE COMPANY OF AMERICA, THE  
SOUTHERN KOKE COMPANY, LTD.,  
THE KOKE COMPANY OF TEXAS, THE  
KOKE COMPANY OF ARKANSAS, THE  
KOKE COMPANY OF OKLAHOMA,  
Appellants,

vs.

THE COCA-COLA COMPANY,  
Appellee.

**Order Under Rule 16, Enlarging Time to March 15,  
1917, to File Record and Docket Case.**

Good cause appearing therefore, IT IS HEREBY ORDERED that the appellants have until the 15th day of March, 1917, within which to perfect its appeal and to file or cause to be filed the transcript on appeal in the Circuit Court of Appeals for the Ninth Circuit.

WM. H. SAWTELLE,  
Judge of the District Court of the United States for  
the District of Arizona.

[Endorsed]: No. 3012. United States Circuit Court of Appeals for the Ninth Circuit. Order

Under Rule 16 Enlarging Time Until March 15th, 1917, to File Record Thereof and to Docket Case. Filed Jan. 13, 1917. F. D. Monckton, Clerk. Re-filed Jun. 15, 1917. F. D. Monckton, Clerk.

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*In the District Court of the United States for the  
District of Arizona.*

No. E-21 (PHOENIX).

THE COCA-COLA COMPANY,

Plaintiff,

vs.

THE KOKE COMPANY OF AMERICA et al.,  
Defendants.

**Order Under Rule 16, Enlarging Time to April 10,  
1917, to File Record and Docket Case.**

For good cause, IT IS ORDERED that the time within which the Defendants shall file their record on appeal in the Circuit Court of Appeals be, and the same is hereby extended to and including the tenth day of April, 1917.

Dated at Phoenix this 24th day of March, 1917.

WM. H. SAWTELLE,

Judge.

[Endorsed]: No. 3012. United States Circuit Court of Appeals for the Ninth Circuit. Order Under Rule 16 Enlarging Time to April 10th, 1917, to File Record Thereof and to Docket Case. Filed Mar. 28, 1917. F. D. Monckton, Clerk. Re-filed Jun. 15, 1917. F. D. Monckton, Clerk.



